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DOMESTIC HEATING IN AMERICA

WITH a view to ascertaining the methods of heating, cooking and hot water supplies in operation in the U.S.A. that might be suitable for adoption in this country, the Ministry of Fuel and Power suggested a visit to typical cities there. Its representative, Mr. J. C. Pritchard, was joined by Mr. C. C. Handisyde, of the Building Research Station, and Mr. R. H. Rowse, of the Fuel Research Station, and together they investigated conditions in 12 important towns, and also gathered other information which is embodied in a report recently issued.* (A summary of its recommendations appeared in our last issue.) The towns visited were mostly in the north-eastern region, where the winter climate is a great deal colder than in Britain; this is not, however, the only factor, as in this region the humidity in winter is very much lower than here, which has an important influence on the effect of heat and cold.

It is not always realised that the latitude of the main group of North American cities is some 12 degrees farther south than that of Britain, and that they have in winter about double the number of hours of sunlight; thus, despite the cold climate, they receive a great deal more radiant heat which, in calm weather, qualifies the acute sensation of cold in the open air. This, together with the relative dryness, may be a reason why, in America, a much higher indoor temperature is acceptable than with us; some 70° F. is usual as against about 62° in this country.

Another influence on the methods employed is the uniform continuance of climatic conditions in contrast to the very varied and uncertain character of our own. Thus, frequent adjustments are unnecessary, while in view of the great difference between outdoor and indoor temperatures, the casual ventilation by opening windows customary with us is not practicable and all air must come in through the heating apparatus and pass outward if ventilation is to be secured, though in many of the smaller houses the apparatus used does not provide for this.

Starting with the simplest form of heating, it is found that the self-contained space-heater in the form of a free standing stove is popular, where the fuel box heats the air in an outer jacket, inlet and outlet grids providing for its circulation. Where there is easy transmission from the living-room to all parts of the house, which is often the case owing to the absence of doors or to these being left open, the warmth is fairly distributed and the initial cost of this type of heating is low, while the fuel may be that best obtainable in the district: coal, wood, gas or oil. The drawback is that with solid fuel this and the ashes have to be dealt with in the living-room, so that it is regarded as preferable to place the heater in the basement. In this country basements are rare, but in the U.S.A. they are general by reason of the facts that, owing to the severe frosts, foundations and services have to be kept at least four feet below the surface, and heavy snowfalls make it desirable for the ground floor to be two or more feet above it; thus, a basement does not greatly increase the cost, and naturally it becomes a useful adjunct for various purposes, including the location for the heating stove. Sometimes this latter is of the space-heating type, delivering warm air through a grating in the floor, but it may be, and is, often combined with a system of ducts serving the rooms independently for one, two or more floors and improved by return ducts from distant points in the rooms, equipped with filters and blowers to ensure circulation.

A few examples were found of heating by radiant elements, but it is notable that these were at Portland on the west coast (electric) and Charleston in the south (gas), where winter conditions are less severe. There has been very little demand for "topping up" with radiant heat, though it is appreciated that with rooms facing south some reaches them from the sun, and the screens or blinds required for windows in the summer can be adjusted or removed in winter. Hot water or steam heating is used in about one-third of the urban houses in the U.S.A., but chiefly in multiple buildings and "luxury" homes, although there appears to be a tendency for their increase lower down the income scale. In the whole of the U.S. 89 per cent. of the houses rely on space heaters, warm air heating, steam or hot water as their source of heating; the remaining 11 per cent., depending on fireplaces or other appliances, are mainly in the southern states.

Detailed specifications state the requirements for satisfactory warm air heating; the efficiency for solid fuel is given as 55 per cent., for oil 72 per cent., and for gas 75 per cent., results very far superior to those of our own open fires. At the same time it must be recognised that on the lines adopted in America, warm air heating would not be satisfactory in this country, though in a modified form, accompanied by a reinforcement of radiant heating, it would give pleasant results. In the U.S.A. the ordinary fireplace is not considered seriously as a principal method of heating, but there are in use types of open fire which combine convection with radiation, on the lines of types recently advocated here, where an open fire is surrounded by a warm air chamber with openings or flues through which the air can circulate. This principle has been extended to include the whole length of the flue, where a gas fire has a metal chimney tapering from 12 in. to 6 in. within a flue 18 in. square, from the upper part of which a fan delivers air downwards to various outlets in the house.

Panel heating has not so far been much used, but warm air floor and ceiling heating has been tried, and the results are claimed to be satisfactory. Studies are being made as to the provision of heating from electrical storage in relation to the peak load, but these have not yet reached finality. Various forms of apparatus combining heating with hot water supplies were also examined, and the designs for gas and electric cookers show valuable development. A good combination is that of a solid fuel with a gas cooker, the first being preferred in winter and the latter in summer.

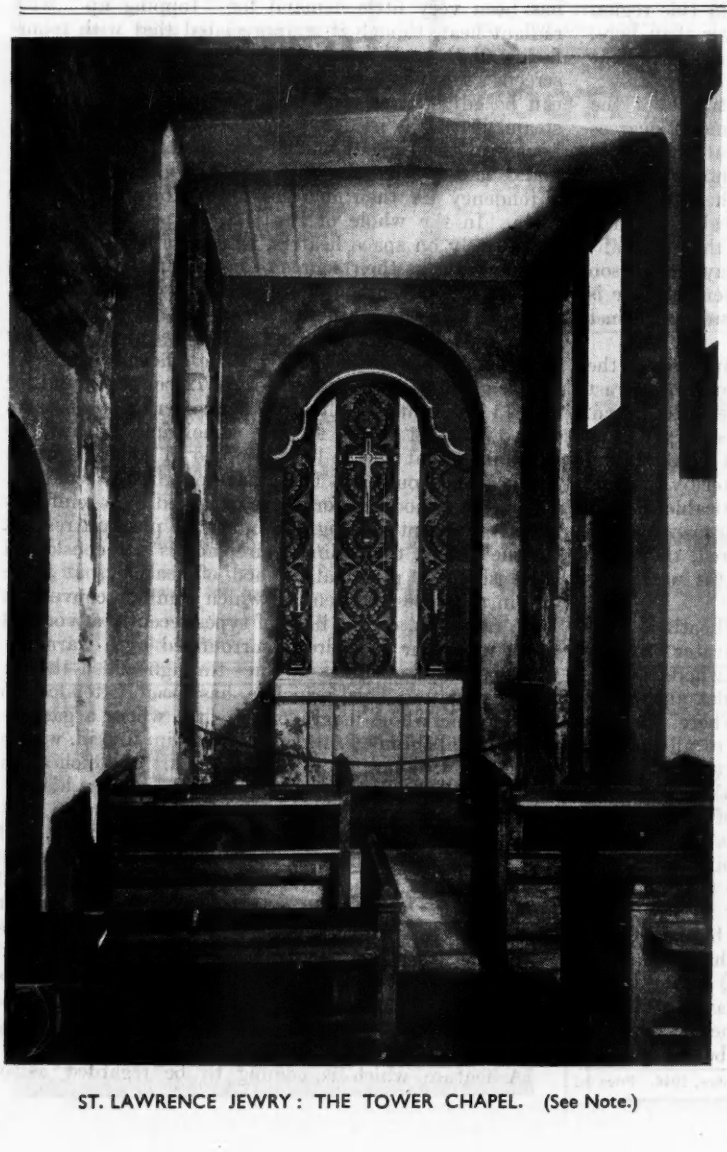
A feature which is coming to be regarded as of

* Domestic Heating in America. H.M. Stationery Office, 1946. Price 3s.

increased importance in American building practice is that of insulation. Roof insulation is generally regarded as of more importance than that for walls, and was always provided immediately above the top-floor ceiling level in preference to in the sloping roof, the interspace being usually deliberately ventilated to avoid trouble from condensation and to afford summer cooling. It is also likely that at the customary high internal winter temperature the loss at the ceiling would be less than through the greater area of the roof; there appeared to be no difficulty in providing adequate winter insulation with flat roofs, but it was understood that summer insulation had sometimes been found unsatisfactory owing to the build-up of heat during the day causing inconvenience at night. For the houses of frame construction, sometimes with a 4-in. exterior brick veneer, insulation was either by means of soft materials as an interstud filling or rigid substances as a wall lining; brick walls were often battened inside and in some places an external half-brick wall was lined with 4-in. or 6-in. hollow blocks; the 11-in. cavity wall was quite unusual. Insulation to floors above basements is rare, but sometimes these were complained of as cold.

"Soft" insulation materials in most common use include rock, slag and glass wools. Shredded wood or bark, cotton, paper or cellulose fibres were also seen; such materials are usually treated to reduce fire risk. Vermiculate was employed over ceilings or as an aggregate for lightweight building blocks. Fibre boards are used as a combination of insulation and lining material, aluminium foil is recognised, but cork insulation has not been employed. The amount of heat loss through windows is well understood, and double glazing has been adopted, though it is not in general use except in Montreal, Canada. This takes two forms, the permanent, unusual in housing generally, and removable, fitted for winter only; these storm sashes are normally top-hinged and capable of some degree of opening, but it is doubtful if windows are opened at all in cold weather.

A great deal of information derived from practice or experimental work is included in this report, and the conclusion is reached that there are many features of American methods offering useful hints for the modification of our own, affording better results in fuel consumption, reduction in smoke and general cleanliness.



ST. LAWRENCE JEWRY: THE TOWER CHAPEL. (See Note.)

NOTES AND NEWS

Tradition and the Small House.

THE proposed forthcoming debate at the Housing Centre on small cube *versus* open planning in houses promises to be both lively and instructive. At first sight the open plan would win hands down—freedom of movement, increased space, more natural ventilation, reduced walking distances from room to room (usually) and better room proportions, as against an antiquated form of plan to suit a type of life well past.

Yet, rightly or not, there must be something in the standard, old-fashioned plan of a small house that it should have endeared itself to so many people. The argument that people take what they are given is reasonable up to a point, but many cases have been known of a person confronted with the two types choosing the traditional one. It is, perhaps, a matter of tradition and, of course, of age. Most middle-aged people have spent their lives in houses with the standard plan and, if offered a house incorporating a completely new design for living, refuse, reasonably enough, on the grounds that they are too old to change their domestic pattern.

The free plan has much in its favour, but has an appeal only for a particular type of person. This type, as a rule, is under 45 years of age, and usually rather intense about living in a house which he feels to be an expression of present trends. The schemes of Gropius and all the little Gropii do not find favour with people who have spent their youth and formative years deep in the bosom of Victorianism and Edwardism. Something more racy of the English tradition must be found for them than a fairly exact copy of something done on the Continent round about the "thirties."

St. Lawrence Jewry.

AMONG the 11 war-damaged churches recommended for restoration by the Bishop of London's Commission (whose report is reviewed on page 446) is St. Lawrence Jewry. This Wren building was burnt out on the night of December 29-30, 1940, by enemy aircraft, with the loss of its bells, and the whole of its furnishings and furniture, with the exception of the wrought-iron sword-rest from the Lord

Mayor's pew, the 19th-century brass lectern eagle and (because stored in the strong-room) the parish registers, communion vessels and Ribera's 17th-century painting of St. Lawrence's martyrdom.

In 1943, plans were made for the erection of a small chapel in the ruins, and the space beneath the tower was roofed in and enclosed, affording room for about 20 worshippers. The chapel and fittings were designed by Mr. Cecil Brown, L.R.I.B.A., Surveyor to the Church Council, who was able to use oak pews and marble and slate floor blocks salved from the burnt church of Christ Church, Westminster, and presented by its vicar and churchwardens. The small windows were designed by Mr. Christopher Webb, and a service bell of 3 cwt. was cast and presented by Mr. A. A. Hughes, of the Whitechapel Bell Foundry. The crucifix on the dossal was modelled and presented by Mr. Cecil Brown, who tells us that this was his first essay in sculpture. The Tower Chapel was dedicated on December 18, 1943, by the Archdeacon of London at a service attended by the Lord Mayor and the High Commissioner for New Zealand (Mr. W. J. Jordan), St. Lawrence Jewry being the New Zealanders' Church in London.

Mr. Cecil Brown has been appointed by the Church Council as architect for the rebuilding of the church.

The King's Pictures.

An exhibition of the King's pictures is now being held at Burlington House by the gracious permission of His Majesty. It consists of some five hundred pictures from the Royal Collection, selected from all the palaces in which they are permanently kept, and includes a large number of works which are not normally accessible to the public. Such an opportunity to see these fine pictures under such conditions has never occurred before, and it is doubtful if it will happen again, so that those interested should not fail to visit the exhibition.

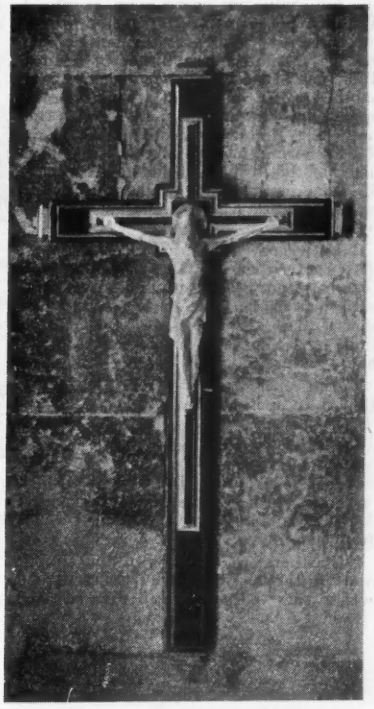
It is not possible to enumerate here the many subjects on view, painted by the great masters of their period. The portraits range from the reign of Henry VIII to that of Queen Victoria. Of special interest are a number of Canalettos which include London views remarkable for their perspective and architectural detail, and a pleasing introduction of the figures in period costume. A tribute must be paid to the hanging committee, who have carried out their task admirably, and to the authors of the catalogue, which contains a wealth of historic and other information. The exhibition remains open until March 16, 1947, from 10 a.m. to 7 p.m.

M.o.W. Chief Architect: A Correction.

In our issue of October 18 we mentioned here that the post of Chief Architect at the Ministry of Works was vacant. This, of course, was incorrect, as Mr. W. A. Rutter, O.B.E., A.R.I.B.A., is the Ministry's Chief Architect.

From Brazil.

A friend recently home from Brazil tells us of the great activity taking place in the preparation of the scheme for the new town of Ciudade Dos Motores. The town, for 25,000 people, is to be built upon a plateau, and will be shaped to the contour of the land. The style of architecture is to be that which has gained well-merited renown for Brazilian architects, that subtle mixture of tradition and contemporary feeling as exemplified by the best work of Le Corbusier, from whom many of the younger Brazilian designers



ST. LAWRENCE JEWRY. The Chapel in the Tower, shown on facing page, was designed, with its fittings, by Mr. Cecil Brown, who also executed the sculptured figure illustrated above.

received their training. But it is in the simplicity of the construction (much of it will be prefabricated) that the real interest of the work lies.

A good proportion of the buildings will be constructed of concrete blocks and can be put into place and set by any peasant labourer. The models show that not all of the attractive neo-Spanish tradition has been lost by using new forms of construction, for, although the Baroque style will be missing from the buildings, the layout retains all those features dear to the heart of South Americans—squares, gardens and cafés.

Architect for Harlow.

Mr. Frederick Gibberd, F.R.I.B.A., A.M.T.P.I., has been appointed architect for the replanning of Harlow, Essex, one of the Government's New Towns. Mr. Gibberd, formerly director of the Architectural Association, has designed several blocks of flats, and a new type of steel house constructed to his design has passed the 35,000 production mark. He is also engaged on the replanning of Nuneaton, Warwickshire. Harlow, which will eventually house 60,000 people, is expected to take from 15 to 20 years to complete.

Architect of Fijian Hospital.

A young Yorkshireman who recently arrived in Fiji to take up an appointment as Government Architect found that his first assignment was to draw up final plans for a new hospital and medical centre, which is to be named after Mr. Winston Churchill. The man who is to design the building—it may cost in the vicinity of £750,000—is Major C. H. Nettleton, whose home town is Hull.

Major Nettleton served with the Royal Engineers until he was released to take up his new Colonial post. His headquarters will be at Suva, Fiji's capital.

Professional Announcements.

Messrs. Stanley Hall and Easton and Robertson have taken into partnership Messrs. S. E. T. Cusdin, O.B.E., A.R.I.B.A., A.A.Dip., F. Leslie Preston, A.R.I.B.A., A.A.Dip., and R. Maynard Smith, A.R.I.B.A., A.A.Dip. The firm will be known as Easton and Robertson, and will continue to practise at 54, Bedford-square, W.C.1.

Mr. Francis J. Meeson, A.R.I.B.A., is now in practice at 131, Lichfield-street, Walsall (telephone: Walsall 5796).

Mr. Kenneth Bayes, A.R.I.B.A., of Design Research Unit, has moved to 37, Park-street, W.1 (Mayfair 9255), and would be glad to receive trade catalogues at that address.

The business of chartered surveyors, land agents, valuers and auctioneers carried on by Mr. H. Driver Jonas and Major H. Denton Clark under the name of Drivers, Jonas and Co., at Chester and Llanidloes, terminated on October 5. Messrs. Drivers, Jonas and Co. are continuing their practice at London and Southampton, and Major H. Denton Clark, in partnership with his son, Mr. Myles Clark, under the name of Denton Clark and Co., will practise at Chester and Llanidloes.

The architect's department of Messrs. Hewitt Brothers, Ltd., the Tower Brewery, Grimsby, would be glad to receive trade catalogues.

COMING EVENTS

Tuesday, November 5.

Housing Centre. Lunch-time meeting. "Planning in India and Burma," by Mr. P. J. Marshall. 13, Suffolk-street, London, S.W.1. 1.15 p.m.

Wednesday, November 6.

The Ecclesiological Society. Sir Charles A. Nicholson, Bart, M.A., F.R.I.B.A., on "The Adaptation of Parish Churches as Cathedrals." The Archbishop Davidson Institute, Lambeth-road, S.E.1. 7.30 p.m.

The Institution of Heating and Ventilating Engineers. Mr. S. C. Mount, M.I.H.V.E., on "Ventilation and Cooling in London's Tube Railways." Institution of Mechanical Engineers, Storey's Gate, S.W.1. 6 p.m.

Royal Institute of British Architects. Joint meeting with the Illuminating Engineering Society. Architectural Science Board Lecture. Mr. E. H. Penwarden and Mr. S. Anderson, B.Sc., to speak on "New Lighting for Old Buildings." 5.45 p.m.

Institution of Sanitary Engineers. Annual Dinner and Dance. The Dorchester Hotel, Park-lane, W.1. 7 p.m.

The Royal Society of Arts. Opening of 193rd Session by the Rt. Hon. Viscount Bennett, P.C., K.C., LL.D., President of the Society. The Royal Society of Arts Library, 6-8, John Adam-street, Adelphi, W.C.2. 5 p.m.

Thursday, November 7.

The Reinforced Concrete Association. Mr. K. Billig, A.M.I.C.E., on "Prestressed Reinforced Concrete." Institution of Civil Engineers, Great George-street, S.W.1. 6 p.m.

The Auctioneers' and Estate Agents' Institute. Mr. W. Stanley Edgson, D.L., F.S.I., F.A.I., on "The Effect of the War and Government Policy on Urban Real Property." The Institute, 29, Lincoln's Inn Fields, London, W.C.2. 7 p.m.

From *The Builder of 1846.*

Saturday, October 31, 1846.

At the Quarter Sessions for West Kent, on the 20th instant, a complaint was preferred against Mr. C. R. Badger, the district surveyor of Lewisham, by a number of inhabitants. The complainants charged Mr. Badger generally with an overbearing, litigious and exorbitant line of conduct, and particularly with, first, a non-compliance with a certain section of the Act, which requires that he shall have an office in a central part of the district. . . . Second, with having acted in the double capacity of an architect on his own account. . . . Third, with having demanded and wilfully received fees in cases where none could be legally demanded, and also with exacting higher fees than those prescribed; and, fourth, with refusing, on demand, to return certain fees decided by the official referees to have been received wrongfully.

*** The defendant, who was apparently Badger by name and also by nature, was fined £30, in spite of his defence that he "was the subject of undeserved persecution."

THE CITY CHURCHES

REPORT OF THE BISHOP OF LONDON'S COMMISSION

Reviewed by W. W. Begley

MANY lovers of the City churches were apprehensive in 1941, when the Bishop of London set up a Commission to give "consideration to questions of policy concerning the churches in the City of London in relation to general problems of reconstruction after the present war." It may be said at once that this Report* should set most of their fears at rest.

When Sir Christopher Wren died there were 71 parish churches within the City of London, of which 51 were from his designs. Twenty-four churches have since been destroyed, 18 of them Wren churches, so that on the eve of the last war there remained, in all, 47.

For a long time the destruction was limited to one church at a time, but the passing of the Union of Benefices Act of 1860 resulted in the demolition of 16 in the next thirty years. In 1899 a commission appointed by the Bishop of London favoured the removal of a further 10, but only two more were sacrificed. The last big attack before the war was presented by the report of another commission appointed by a Bishop of London. This one suggested the demolition of another 19 churches. Considerable opposition was aroused and, in the end, only All Hallows, Lombard-street, and St. Katherine Coleman were pulled down, much of the furniture being re-used in the fine new churches All Hallows, Twickenham, and St. Katherine, Hammersmith, by Mr. Robert Atkinson.

The German attack has been far more destructive than all the preceding ones together, and, bearing in mind all that has happened in the past century, apprehension with regard to possible recommendations of the present commission was, perhaps, justified.

Great relief was felt when the Interim Report recommended:

"That no Wren church, not already destroyed, nor damaged beyond the possibility of satisfactory restoration, should be removed, except in a case of most urgent necessity, and after all the schemes for entire or partial restoration have been fully considered.

"Furthermore, in view of the scarcity and historical value of the churches which survived the Great Fire of 1666, that all those churches should be retained as far as possible entire."

The present Report, after a brief introduction and a first section devoted to the question of tithes and finance, settles down, in Section II, to the problem of what is to be done to make good the scars of war.

Of the 47 targets for German bombs, 27 are intact or have escaped serious damage. The remaining 20 call for attention.

Eleven are definitely listed to be repaired: All Hallows, Barking-by-the-Tower; St. Olave, Hart-street, St. Giles, Cripplegate; St. Lawrence Jewry; St. Stephen, Walbrook; St. Bride, Fleet-street; St. Mary-le-Bow, Cheapside; St. Andrew, Holborn; St. Nicholas Cole Abbey; St. Michael Paternoster Royal; and St. Vedast, Foster-lane. One deeply regrets the irreparable loss of the fine fittings of St. Lawrence Jewry and St. Mary-le-Bow in particular, but the buildings have survived structurally. The only exception is one which the Committee seems to have felt to be doubtful, All Hallows, Barking-by-the-Tower, of which the Report says, "This church, apart from its Cromwellian brick tower, has been so badly damaged that restoration in the architectural sense may well be said to be undesirable, it being a mediæval building, but its claim to rebuilding as the parent church of Toc H seems to be unanswerable." Would it not be possible for the work of Toc H to be transferred to one of the other buildings with little parochial life? The ruins, set against the Tower, Trinity House, the Port of London Building and the Merchant Marine Memorial, would perchance set men's minds thinking on the road to peace. Moreover, the open space with flowers would be æsthetically preferable to sham Gothic.

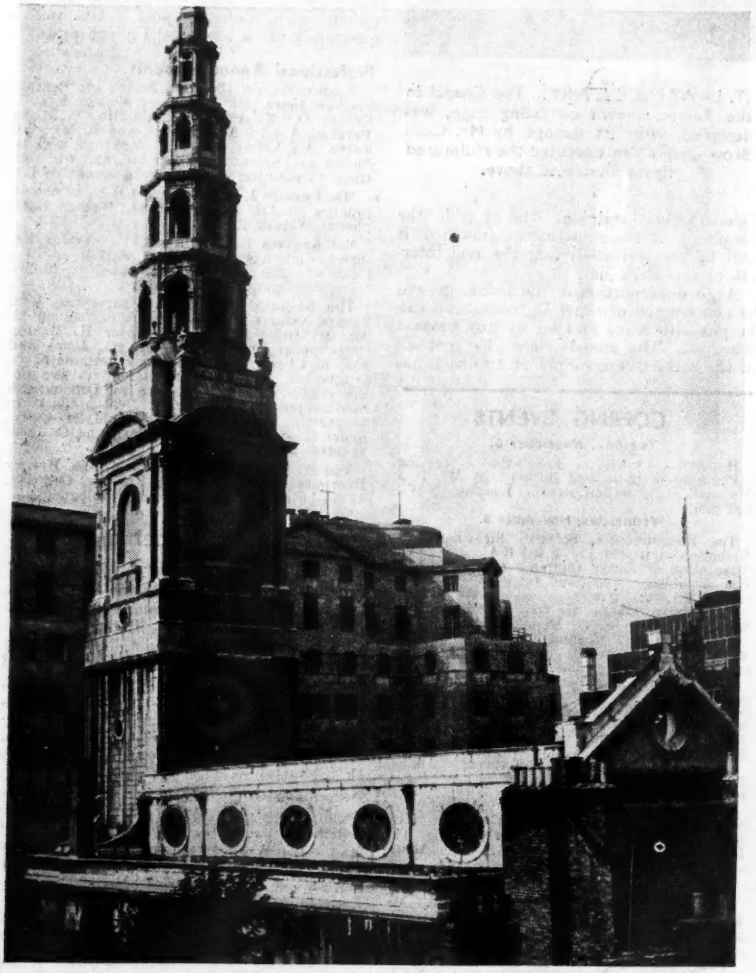
Four churches are set aside for special purposes. St. Augustine, Watling-street, is to be adapted for either a Chapter House or a Choir School for St. Paul's Cathedral, two very excellent suggestions. Christ Church, Greyfriars (Newgate-street), and St. Dunstan-in-the-East are to be incorporated into Church Halls or Institutes. Everything will depend on how this is done, for both churches have outstandingly beautiful towers, almost intact, which should most certainly dominate the new buildings. The fourth church, St. Stephen, Coleman-street, is a more doubtful case, but only in the sense that as it is destroyed to all intents and purposes, one wonders whether it would not be better to move it into the next class and use one of the undermentioned churches as an Institute in its place.

The last group comprises five churches, either destroyed or very badly damaged, which it is considered should be "written off," and the sites sold:—St. Mildred, Bread-street, St. Andrew-by-the-Wardrobe, St. Alban, Wood-street, St. Mary, Aldermanbury, and St. Swithun, London Stone.

Of these, St. Mildred, Bread-street, has been completely destroyed, with the exception of a portion of the brick tower, and the disposal of the site seems not unreasonable. St. Swithun's is considered by the Commission to be too severely damaged to be capable of satisfactory restoration short of almost entire rebuilding, and, although its disappearance will be a serious loss historically, the only alternative course would seem to be the doubtful one, in this case, of the retention of the ruined shell.

In the case of St. Alban, Wood-street,

* "The City Churches," being the Final Report of the Bishop of London's Commission. Published by the Press and Publications Board of the Church Assembly. 1946. 20 pp. Price 1s.



ST. BRIDE'S CHURCH, FLEET-STREET, is one of the City Churches recommended for restoration.

Another City Church to be restored is ALL HALLOWS, Barking-by- the-Tower, parent church of Toc H.

the interesting suggestion is made that the tower might be taken down and rebuilt as part of a new suburban church. The towers of the City churches have always been so built in that only the topmost storeys are exposed on all sides, and re-erection on an open site is not a very satisfactory plan. The rebuilding of the tower of All Hallows, Lombard-street, at Twickenham, is the blemish on an otherwise interesting scheme.

The last two churches on the list, St. Mary, Aldermanbury, and St. Andrew-by-the-Wardrobe, appear to be condemned on grounds of expediency rather than on account of difficulty of repair, and the authorities might well consider substituting one of these for St. Stephen, Coleman-street, as a Church Institute or Hall.

The money raised by the sale of sites and by the adjustment of endowments is proposed to be utilised for (a) the erection and maintenance of Church Halls, (b) supplementing the war damage payments to ensure worthy repair, and refitting of the other churches, and (c) the building and, where possible, the endowment of new churches in Greater London.

Opinions will necessarily differ on details, but this is a wise and statesmanlike Report.

MEMBERS' SKETCHES AT AN A.A. EXHIBITION

An exhibition of members' sketches is now on view at Bedford-square. The choice of subject matter is varied, and naturally drawings of architectural interest dominate. A number of younger men's work is on view, which is pleasing to see. The older men whose work is well known are also in evidence—Westwood, Leathart and Musman, for example. Presentation varies as well as the media used. A number of the sketches are impressionistic; others are more in the architectural draughtsman's manner. A few subjects may be mentioned at haphazard. No. 76, by E. J. Low, "V-day, Ludgate-hill," a view looking toward St. Paul's, is a good recording in pencil of that well-known view. No. 43, "Stockholm," by Graeme Highet (reproduced), is a free and unlaboured pencil and coloured chalk drawing of this popular Town Hall; it has perspective and tone value. The same exhibitor's "Hussian" (No. 43), a native, is in the same medium. No. 39, "A Cotswold Farm," by P. J. Westwood, is an ink-and-colour-wash drawing executed in a bold and sure manner. A breakaway from architectural delineation is No. 80, "Tigris Bank," by Eric Rheinburg. This is a big subject in pen and wash, the heavy clouds, river and building on the left conveying an atmospheric impression. No. 57, "Barnery, Saffron Walden," by Julian Leathart, is a good striking interior of an old barn, with farm implements throwing pleasing shadows and silhouettes. A second subject by the same artist is a lithograph, No. 11, drawn on the stone and printed by him, a most promising study of a picturesque subject. It is a new line for A.A. men and a good one. No. 74, "Farm Buildings, Somerset," by E. B. Musman, is a clean and direct pencil sketch. Many other subjects are worthy of mention, but space prevents. The exhibition is open up to November 23, from 10 a.m. to 6 p.m.

From A.A. Members' Exhibition.

STOCKHOLM. From a drawing by Graeme Highet.

THE FUTURE OF HULL

THE LUTYENS-ABERCROMBIE PLANNING REPORT

THE plan for the remodelling of Kingston-upon-Hull was entrusted in 1944 to the late Sir Edwin Lutyens and Sir Patrick Abercrombie, and the report has now been issued by the latter, with the co-operation of the city officers and a carefully selected staff working under the leadership of Sir Patrick. It also includes much of the preliminary survey prepared independently by Mr. Max Lock and his associates, and also a chapter on the geology and agriculture of the region by Dr. Dudley Stamp.

The problem of bringing the city of Hull into line with its requirements at the present day is an exceptionally complicated and difficult one, owing primarily to the fact that its site is at one uniform low level with a high-water table, rendering it impossible to work downward and very costly to go upward. The original selection of this site for a commercial port by Edward I in 1299 was a wise one, as the river Hull was most suitable for seagoing ships of that time, and in fact for the succeeding four centuries, as additional docks were only undertaken some 450 years later. These were formed on the line of the old city ditch, and it was about another 100 years before dock development started along the Humber frontages, and now this provides for the shipping while the Hull river takes only barge traffic which is stranded on tidal "wharves" at low water.

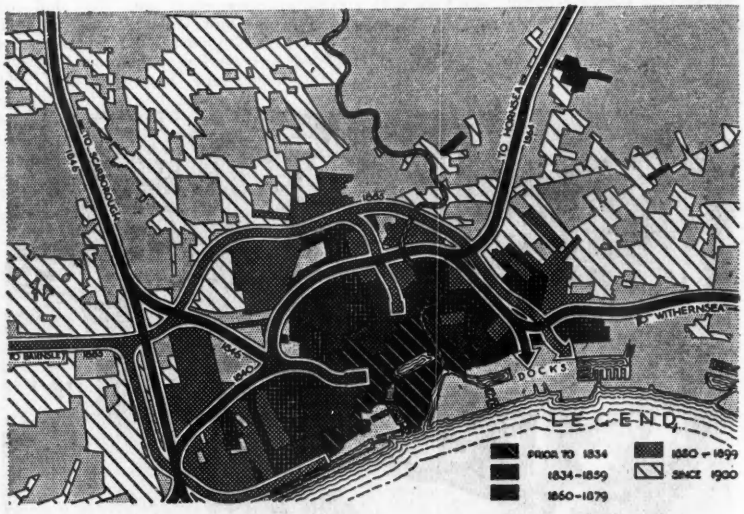
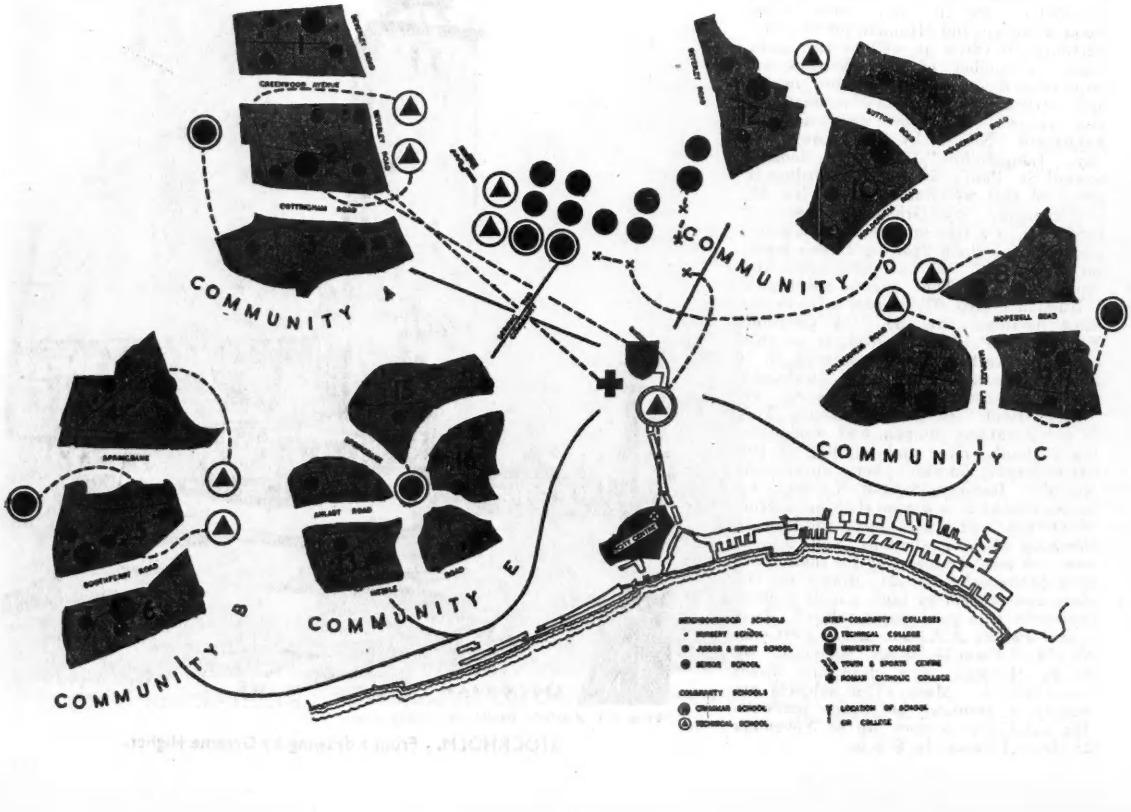
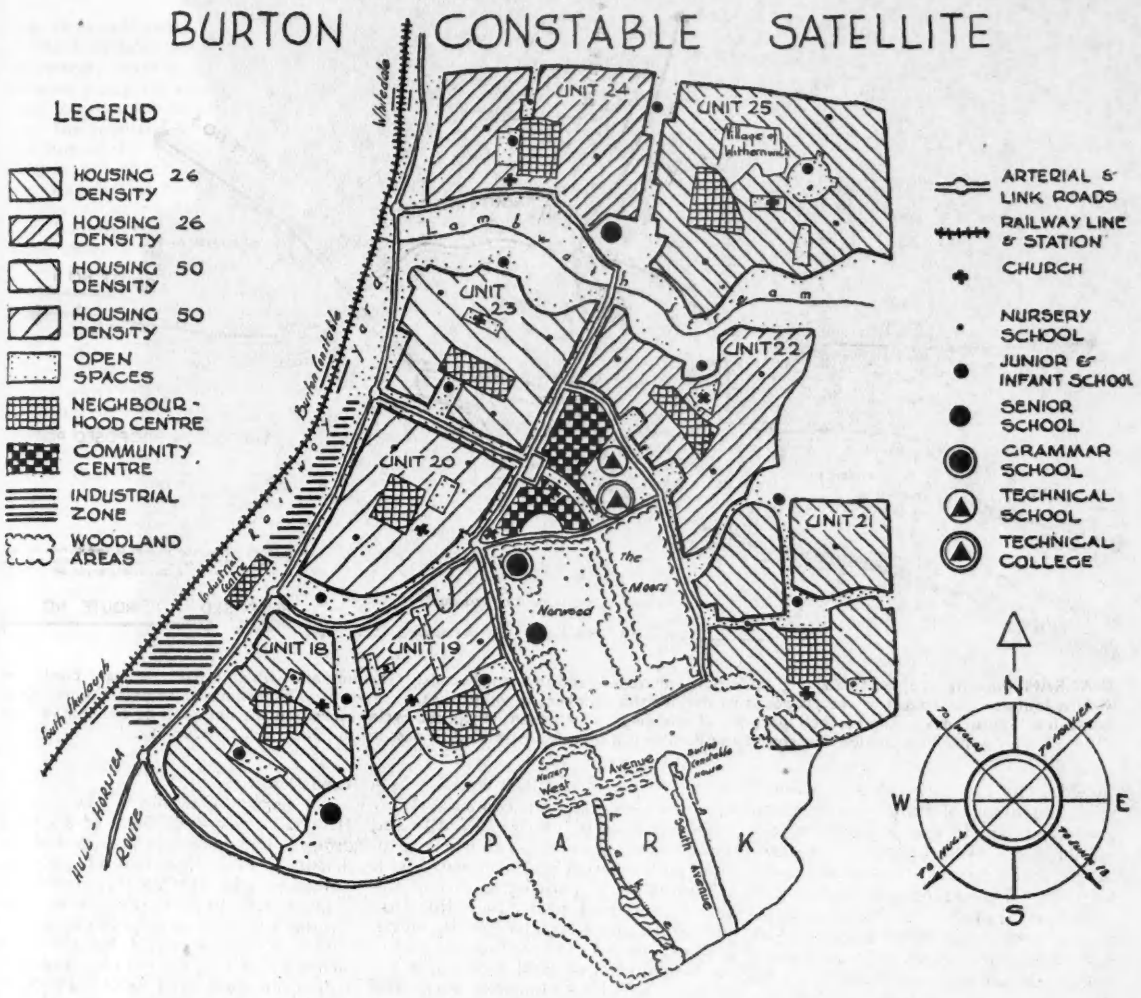


Diagram showing Evolution of the Railways and Urban Growth.

The nineteenth century brings us to the advent of the railways, which has added another even more serious complication to the city's problems; the N.E. Railway reached Hull in 1840 and subsequently encircled the city by its lines to Withernsea and the eastern docks; in the early enthusiasm for railway facilities it was permitted to run these at ground level, so that consequently Hull suffers from at least five level-crossings, most costly in the resulting loss of time and inconvenience. In 1885, another circuit farther north was taken by the Hull and Barnsley line, but naturally in this case previous experience dictated that it should be carried above the level of the roads. Nevertheless it is detrimen-

SCHOOLS DIAGRAM showing the basis for community planning.





tal to the orderly development of the city which has now spread far beyond both these circuits.

The points referred to above are so vital to the proposals made in the report that it appeared desirable to refer to them before proceeding to summarise the recommendations made for the general remodelling of the city to bring it into line with modern town-planning practice. Starting with an interesting historical review of the progress of Hull from its foundation to the present time, it continues with an outline civic survey of present conditions including the influence of the very considerable bomb damage on possible schemes for reconstruction. It then passes on to the crucial problem of the railways, offering as its solution the removal of the inner circuit and the duplication of the outer one in substitution, with the necessary but somewhat difficult adaptations which would enable this to be done. This is followed by a brief reference to the obviously desirable provisions for air communications. In view of the importance of connections with the Baltic countries it is indicated that a seaplane station at Hedon Haven would be appropriate.

Internal Planning of City.

Reverting to the internal planning of the city, the requirements for road development include a revised system of radial arterial routes, and a complete inner circuit as well as a semi-circular outer one mainly inside the duplicated rail route previously men-

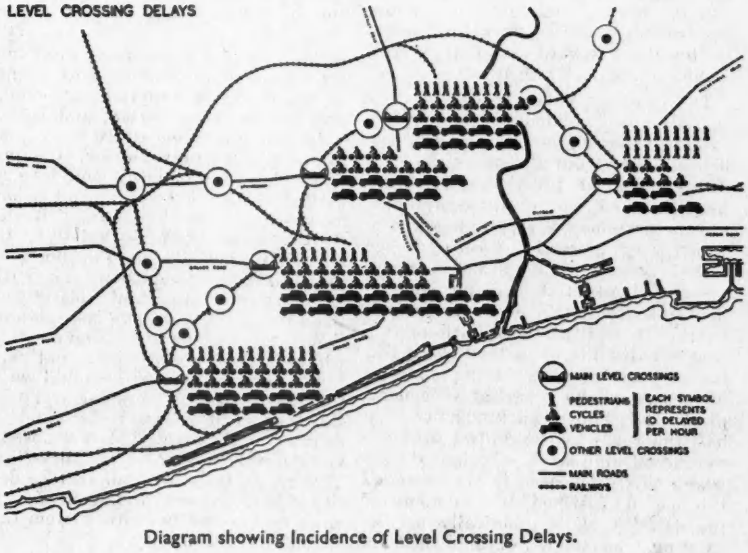


Diagram showing Incidence of Level Crossing Delays.

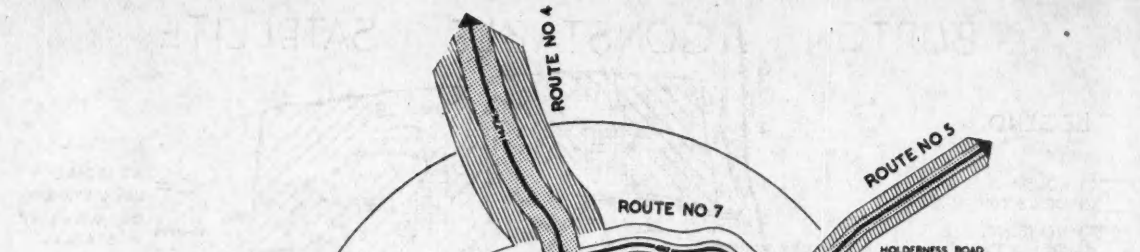

ROUTE NO 4
ROUTE NO 5
ROUTE NO 7
HOLDERNESS ROAD
ROUTE NO 6
SPRING BANK
ANLABY ROAD
BOOTHFERRY ROAD
ROUTE NO 2
ROUTE NO 1
HESSLE ROAD
ONE MILE RADIUS FROM CITY SQUARE
ONE & HALF MILES RADIUS FROM CITY SQUARE
TRAFFIC ON PROPOSED ROADS
CYCLES
OTHER VEHICLES 9150
CYCLES 7348
AT ANY POINT THE WIDTH OF STRIP IS PROPORTIONAL TO THE NUMBER OF VEHICLES IN EACH GROUP PASSING THAT POINT IN THE COURSE OF A 15-HOUR DAY
PROPOSED ROADS
ROUTE NO

DIAGRAM showing proposed new ring roads (left unhatched) and the radial roads. The numerals which break the heavy black lines (which indicate the routes of the proposed roads) are the numbers of vehicles other than bicycles estimated to pass the particular point in a 15-hour day. The hatched portions of the diagram represent proposed cycle tracks and the numerals by the side of such hatched portions represent the numbers of bicycles estimated to pass those points in a 15-hour day.

tioned. The inner ring has demanded very ingenious planning in order to give headroom to the improved access up the river Hull which is a feature in the scheme to which we shall refer later on. The outer ring fits in well with the radials and presents no serious difficulties in its alignment; it has roundabouts at all more important points, including four where it serves the six main radial roads. An important factor in the more extended road plan is the possible construction of a Humber road-bridge about four miles west of Hull; this is designed as a suspension bridge of some 4,500 feet span, and would serve a main route running north and south along the eastern edge of the Yorkshire wolds so that the westward radials from Hull would all connect with it.

The city has not a good record as regards road accidents, due to some extent to the congestion caused by the level-crossings, but also to a number of dangerous road junctions. This has been dealt with in a very comprehensive programme for replanning which, while very attractive, seems to go rather beyond what is necessary to meet the essential demand and is doubtful from the economic standpoint. In addition to this there is a considered study of methods for parking cars and references to the provision of such car-parks as part of the general plan. It is laid down that more than half the roads in the central area are redundant and can be eliminated, and where this proportion is not exceeded this can be justified, but in many of the detailed plans practically all the existing roads are extinguished in favour of a new layout, a course which is unnecessary and uneconomic.

The study of industrial activities and their locations indicates that the principal ones are nearly all connected with the processing, packing and distribution of imported goods, including timber, grain and seeds, fish, fruit, metal, leather, etc. Flour milling is mainly located along the Hull river, and the heavier industries along the docks and railways. The zoning plan provides for defining these areas more specifically and for removing from them the interspersed groups of residential and other utilisation, but this changeover is intended to operate gradually, the transfer of the area immediately north of the city centre taking place at a later stage.

The reduction of the residential sites in the central area and the density limitations brings the appropriate population down to some 266,000, and as it is estimated that some 60,000 more than this should be provided for, it is proposed that this balance should be regarded as an "overspill" and accommodated in a satellite town at Burton Constable, about nine miles to the north-east, located to the north of the Elizabethan mansion and park. This is an important feature of the scheme, and it is intended that this separate organisation, while largely independent and with industries of its own, should have the advantage of a close relationship with Hull by road service and the railway to Hornsea. This town would be planned in eight "precincts" on garden city lines, with an average density of 30 to the acre, and its open encircling zone would be distinct from that around the parent city.

Land Densities.

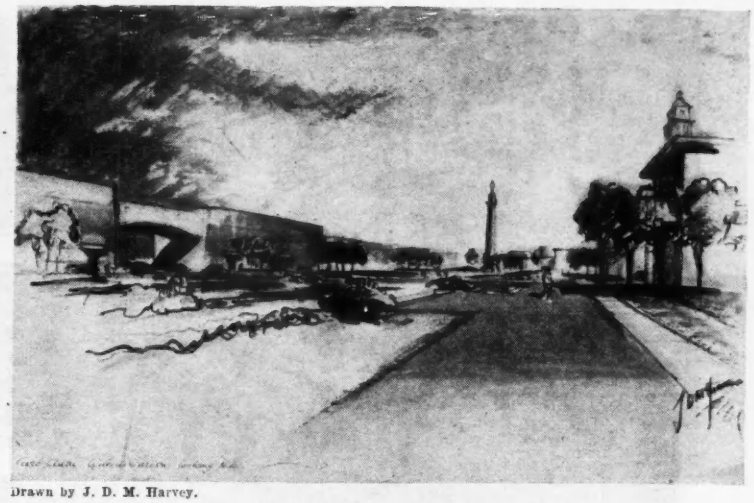
The basis of community planning for Hull itself takes the form of a central group, comprising five precincts with a density of 75 to the acre, and four other groups, east, north-east, north and west, each divided into three, and having a density of 50 to the acre. The divisions are provided by the main roads, by railways and open spaces for recreation and other public purposes. As far as practicable, an open belt is reserved between the industrial and residential zones. This treatment facilitates the distribution of the community and junior educational services, while the senior ones, including the university and technical colleges and the youth sports centre are mainly grouped on the northern margin of the built-up area; other allocations, including technical and grammar schools, are, however, made at various suitably distributed positions.

In reviewing the main features of the plan, two of its proposals seem to demand further consideration before their validity can be established. The first of these is that for the deepening and straightening of the course of the river Hull to make it available for seagoing shipping in lieu of its present use for barges only, into which goods have to be transhipped. This has been generally accepted as advantageous and practicable if the river were impounded, but what would be required goes far beyond a condition merely restoring the state of the river to what it was some 60 to a 100 years ago; the increased depth and width necessary would involve an enormous amount of work in protecting the stability of adjacent buildings, and though many of these demand rebuild-

ing, it is estimated that three-fourths of the frontages would be jeopardised. Moreover, certain measures for continuous pumping would be needed, and four long ramps would be required to give the required height for bridges on the line of the inner road circuit. The case is not exactly parallel to that of the Manchester Ship Canal, as immediately adjacent to the present Hull city boundary, both to the east and west, there are large sites capable of direct access from the Humber main channel, and the Hull river could be reserved for such industries as could accept barge transport as convenient.

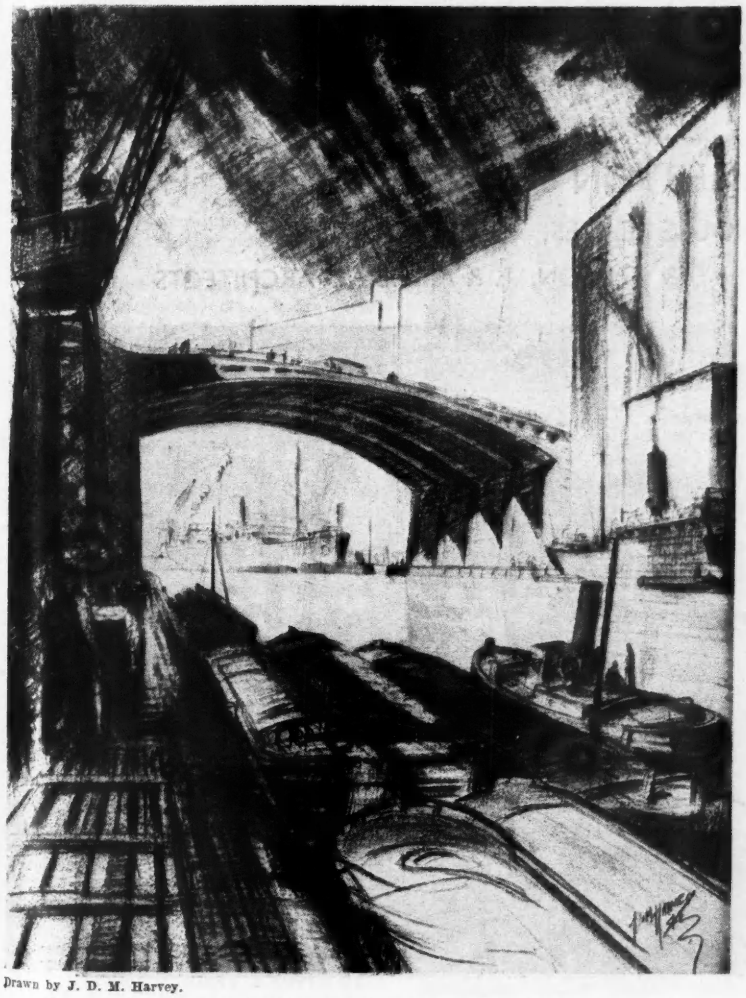
The other feature to which we must refer is that of the railway plan, which leaves some five miles of overhead lines running through the urban area, and appears to retain the two separate terminal stations, while it adds materially to the rail mileage to be operated for passengers and goods. The alternative is a four-truck route carried between the city and the dock areas, which would shorten the rail distances and be less destructive to the amenities. The three western lines would join up and run parallel to the Hessle Road to a new main station near the south end of Princes Dock; it would continue thence by a viaduct south of the city centre to a junction, picking up the two eastern lines, between Holderness Road and Victoria Dock, serving all the numerous dock sidings. This alternative plan would actually reduce the rail mileage, and its comparison with the present proposal seems fully justified.

H. V. LANCHESTER.



Drawn by J. D. M. Harvey.

Proposed Civic Centre, Queen's Gardens, Hull.



Drawn by J. D. M. Harvey.

Proposed high-level road bridge over the "Old Harbour" of the River Hull.

COMPETITION NEWS

Regent's Park Area Redevelopment.

THE Finance and General Purposes Committee of St. Pancras Borough Council have recommended that the selection of architects for the design of buildings to be undertaken by the Council for the Regent's Park Area Redevelopment shall be by means of a competition. At Wednesday's meeting the Council were asked to approve the recommendation in principle.

Farnham Town Plan.

Mr. Anthony M. Chitty, M.A., F.R.I.B.A., A.M.T.P.I. (of Hening and Chitty, architects), has been appointed Town Planning Consultant to the Council at Farnham, Surrey, and will prepare a plan for the town, with special attention to the protection of the town's architectural merits and to landscape development of the River Wey in the area.

A Commonwealth Fellowship.

This year the Commonwealth Fund Fellowships, established to enable selected graduates of British universities to study and travel in the United States, have been resumed after having been suspended throughout the war. Only twenty Fellowships, each of the approximate value of $3,500, have been awarded this time. Of these, one has gone to an architect, Mr. A. B. Drought, a graduate of the University of Liverpool. Mr. Drought qualified in the Liverpool School of Architecture in July, 1941, when the degree of Bachelor of Architecture with first-class honours was conferred upon him. On completing his university course he joined the Army, serving overseas with the Royal Engineers. In America he will be pursuing a course of post-graduate study in the School of Architecture and Planning of the Massachusetts Institute of Technology, and will also be working under the direction of Professor Gropius, Director of the Graduate School of Architecture of Harvard University.

The South-West Front.

THE ZACHARY MERTON CONVALESCENT HOME

WOODHOUSE EAVES, LEICESTERSHIRE

PICK, EVERARD, KEAY & GIMSON, F. & A.R.I.B.A., ARCHITECTS

The North-East Front.

ZACHARY MERTON CONVALESCENT HOME, WOODHOUSE EAVES, LEICS.

THIS HOME FOR MEN WAS ERECTED before the war for the Leicester Royal Infirmary, through the generous bequest of the late Mr. Zachary Merton. It is situated some ten miles from the city in one of the highest and most beautiful parts of the county, in the midst of the Charnwood Forest. The Home is set on the crown of a wooded hill which has a gradient of 1 : 10.

The buildings comprise the main Convalescent Home and an attached nurses' and maids' home. Accommodation is provided for 68 patients and 20 nursing and domestic staff. The main building is of three floors. On the ground floor are kitchen, service and dining-rooms, and reading, recreation and administration rooms. The two upper floors are occupied by the patients' bedrooms on the south-west front, with open-air sun balconies in the centre. The bedrooms, accommodating four or two patients, are partitioned by glazed flush wood and breeze block screens 7 ft. high, with a 3 ft. open space over, so that the whole floor, including the corridor, has free cross-ventilation. On the north-east front are sanitary and service blocks.

The nurses' and maids' home is at the north end of the main building. Bedrooms are provided with built-in wardrobes and drawers, and lavatory basins with glazed tile surrounds. Under the nurses' home, on a lower ground floor, is a garage and large general store, equipped with steel shelving, and at the side the boiler-house.

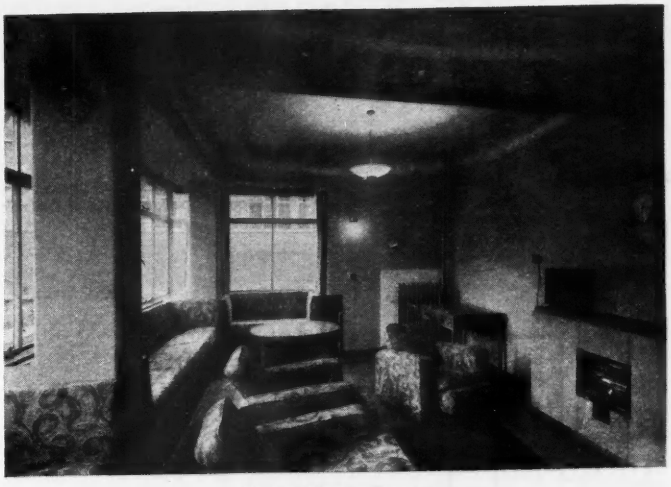
Construction is steel-frame with hollow-tile and concrete floors and roofs. The walls are faced externally with local rough texture mellow-red bricks. The heads, sills and mullions of windows and the copings are in *in situ* and precast concrete, brushed to expose the aggregate of local gravel.

All floors are finished with linoleum cemented to the screeding, with coved skirtings, except in kitchens and service rooms, which have quarry floors. Walls to the latter rooms are finished with cream glazed tiles. The remainder are plastered. Doors and cupboards are in flush oak. The main staircase and balustrade is finished in cream terrazzo. Heating is by low-pressure hot water, and cooking and sterilising by steam and electricity. Laundering is done at the laundry attached to the Womens' Home on the adjoining site.

The general contractors (who also were responsible for hollow tile floors) were Messrs. Wm. Moss and Sons, Ltd., of Loughborough. Sub-contractors were: Structural steelwork, Edward Wood and Co., Ltd., Manchester; roof coverings, D. Anderson and Son, Ltd., Manchester, and F. McNeill and Co., Ltd., London; heating, hot water and steam supply, Wm. Freer, Ltd., Leicester; electrical contractors, Witcomb and Blackwell, Ltd., Leicester; lift, Gimson and Co., Ltd., Leicester; steel windows, Crittall Manufacturing Co., Ltd.; and internal automatic telephones, Gent and Co., Leicester.

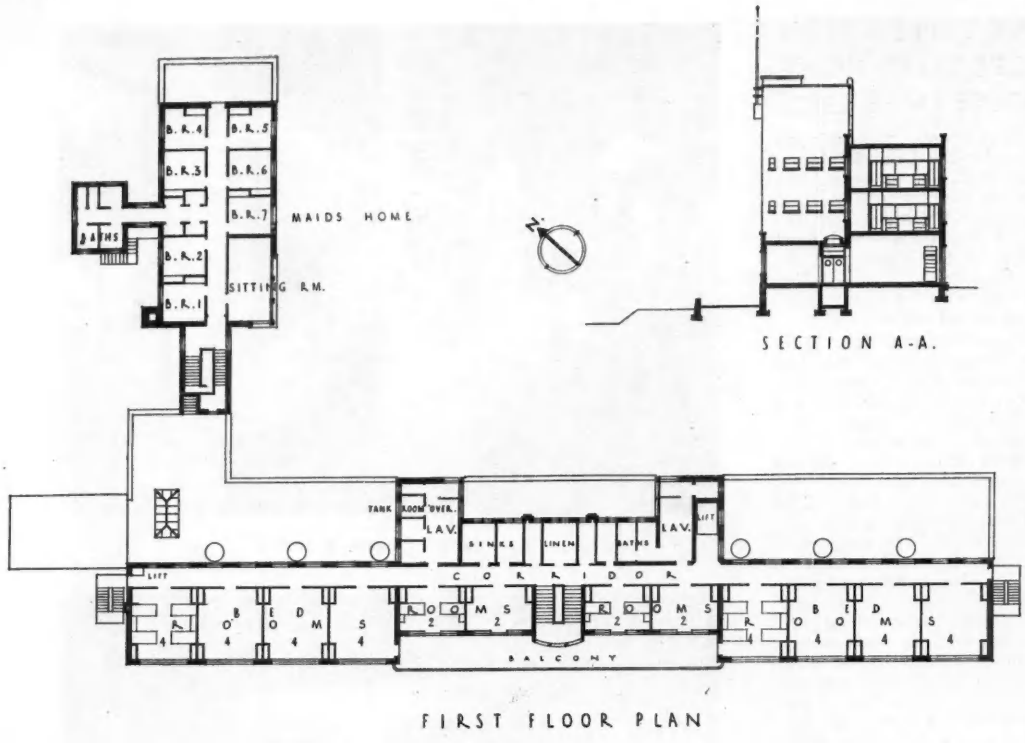
PICK, EVERARD, KEAY & GIMSON, F. & A.R.I.B.A., ARCHITECTS

Corridor and Patients' Bedrooms.



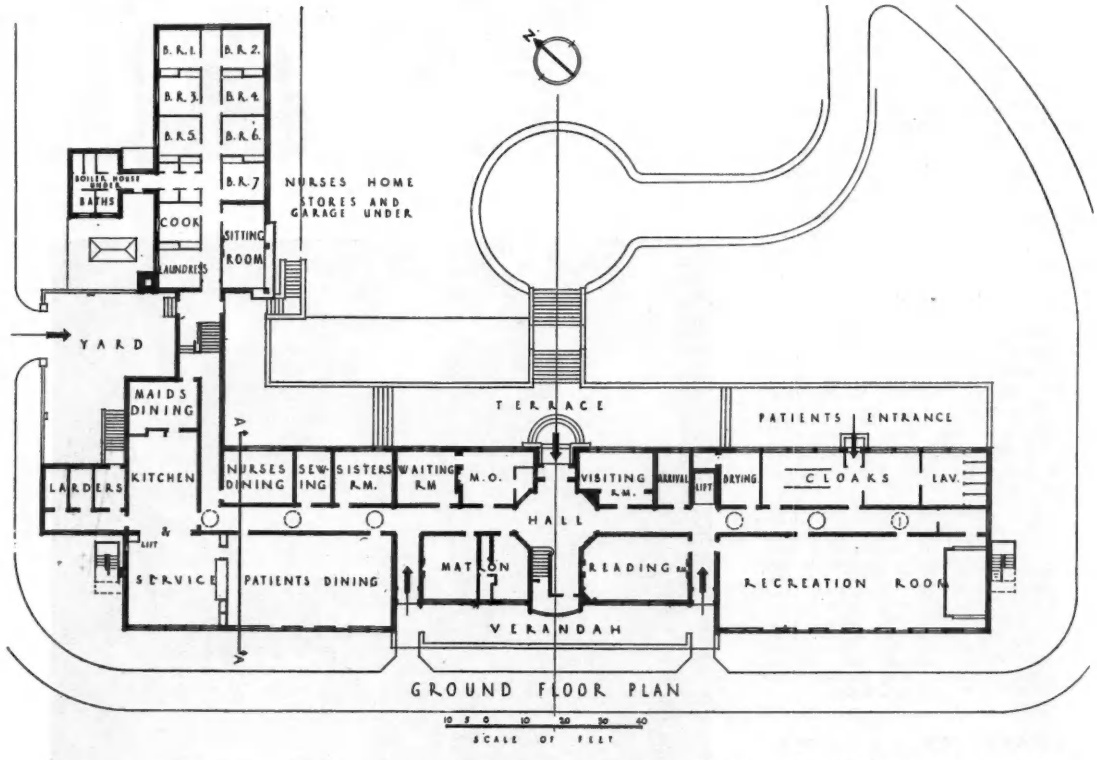
Nurses' Sitting-Room.

Part of main Kitchen.

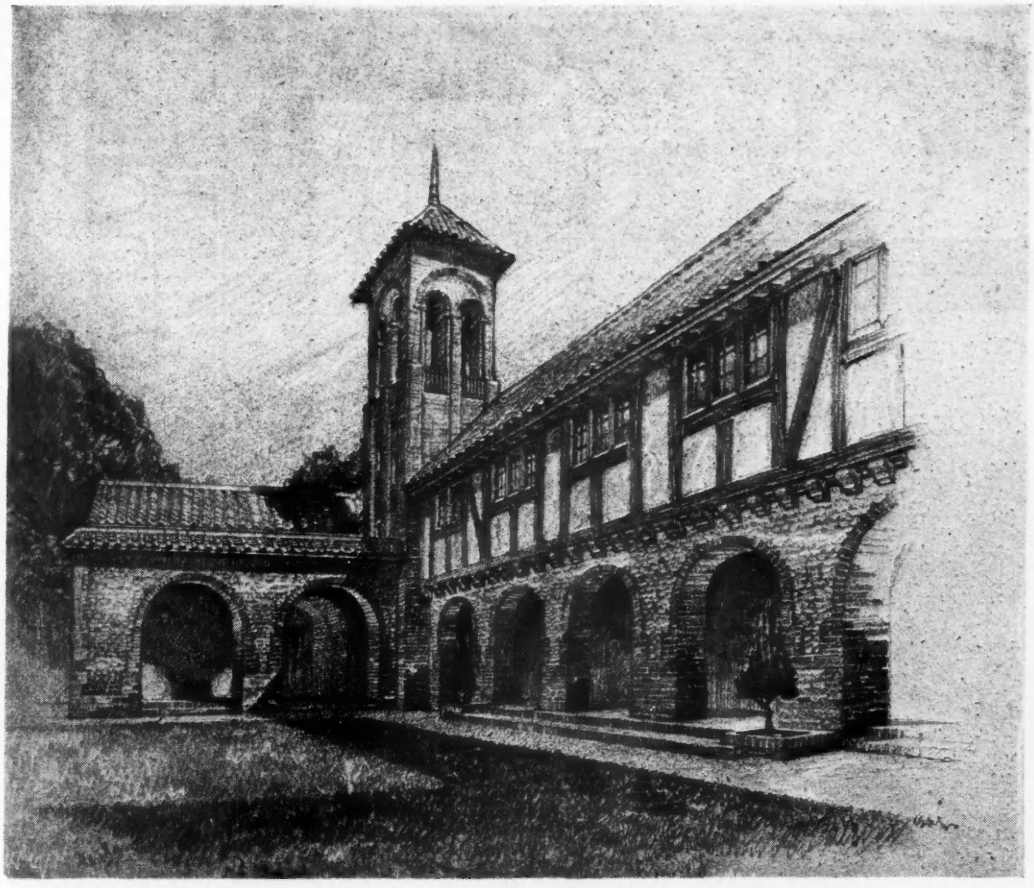


FIRST FLOOR PLAN

The planning of the second floor is similar to that of the first floor, shown above, except that the wing apportioned to the Maids' Home in the plan above is, on the second floor, laid out as Matron's flat and Nurses' Home.



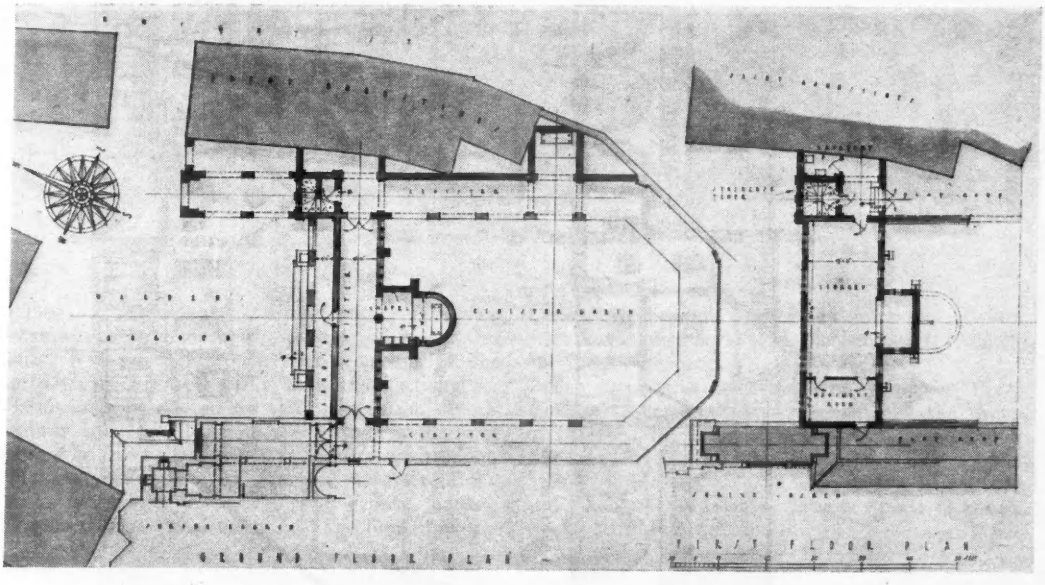
THE ZACHARY MERTON CONVALESCENT HOME, WOODHOUSE EAVES, LEICS.



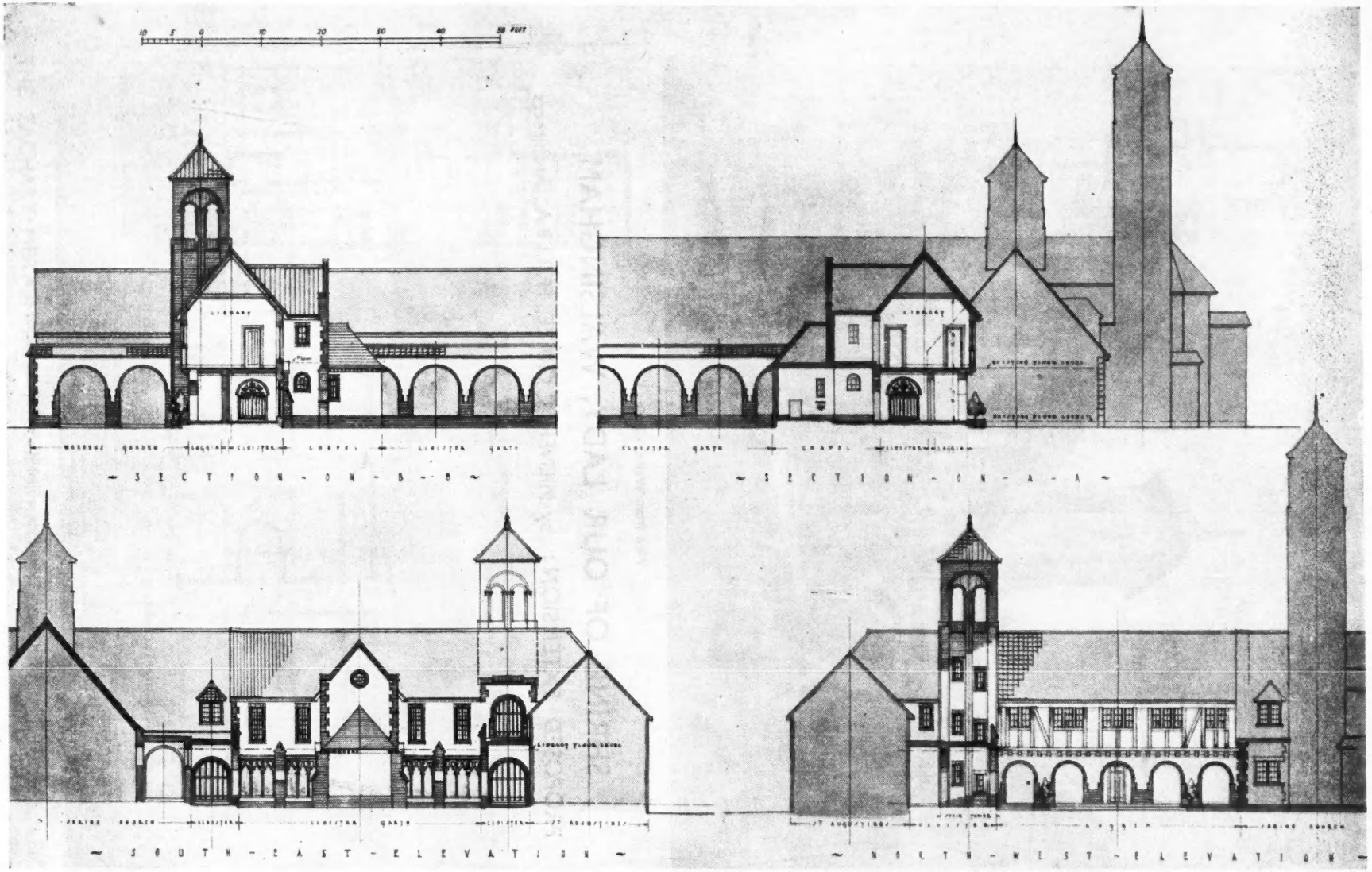
View from Walled Garden.

SHRINE OF OUR LADY, WALSINGHAM

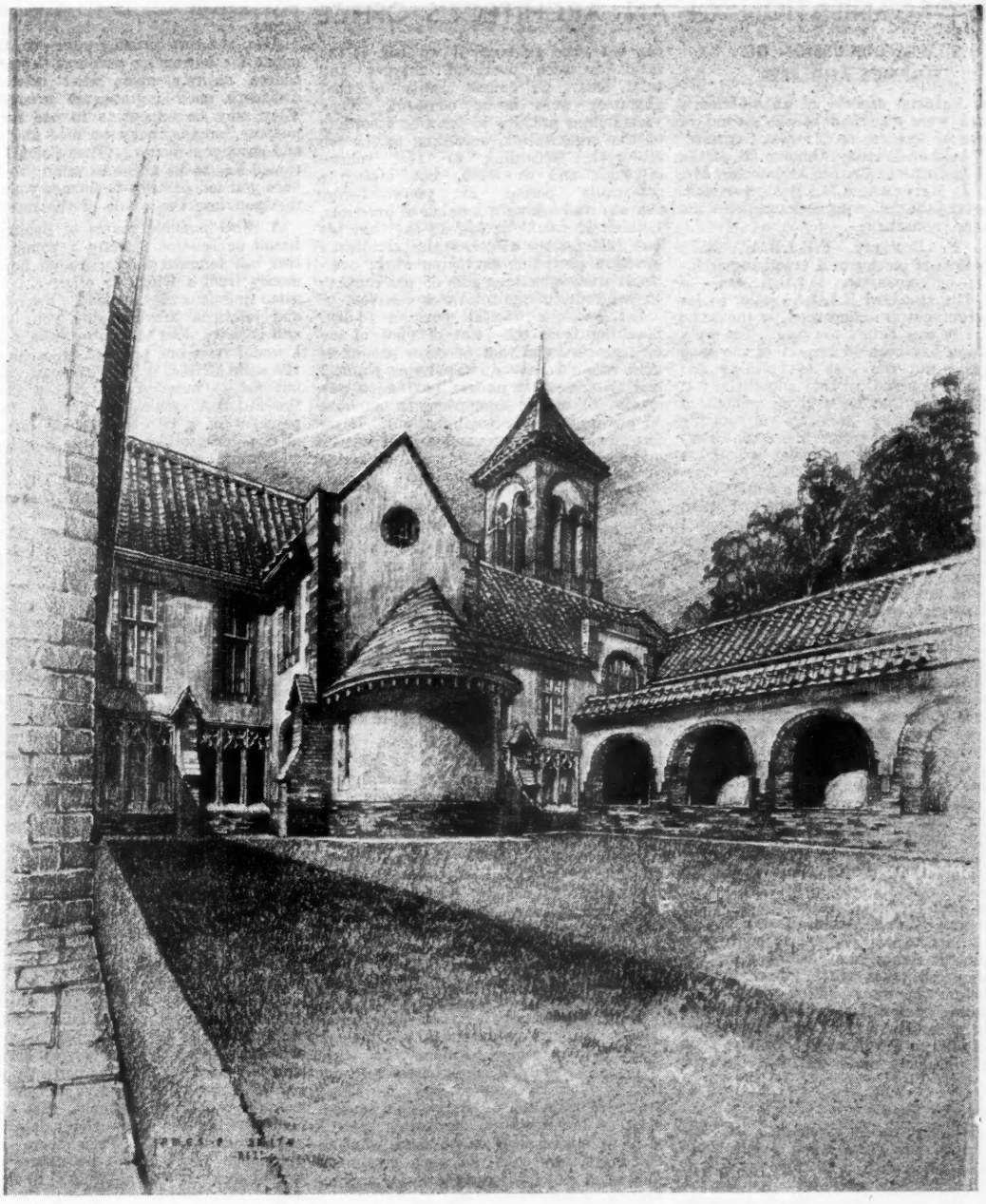
PROPOSED EXTENSION: by MILNER & CRAZE, FF.R.I.B.A., Architects



The Plans. Extensions proposed are shown in deeper tone.



EXTENSION TO THE SHRINE OF OUR LADY, WALSINGHAM. MILNER & CRAZE, FF.R.I.B.A., ARCHITECTS



View from South-West Cloister.

THE ILLUSTRATIONS SHOW THE PROPOSED extension to be made to the existing Shrine of Our Lady, Walsingham. A new chapel opening off the north cloister will be built as a thanksgiving for Victory and Peace and for the preservation of this country from invasion and, secondly, in memory of those who gave their lives for the cause of freedom.

It is proposed to erect, over the cloister and the loggia facing the garden to the Priests' houses, accommodation for housing the large library of the College. The whole of the new work will conform with the existing style of the design used throughout the Shrine buildings.

The architects are Messrs. Milner & Craze, FF.R.I.B.A., who were responsible for the design of the earlier buildings. These were illustrated in *The Builder* for August 24, 1934. The original buildings were founded in 1061, destroyed in 1536, and reconstructed in 1931. The perspectives are the work of Mr. James P. Smith.

EXTENSION TO THE SHRINE OF OUR LADY, WALSINGHAM

THE ORGANISATION OF AN ARCHITECT'S OFFICE

R.I.B.A. DISCUSSION ON FINANCE AND FEES

THE financial aspects of an architect's practice were discussed at the second of a series of lectures on "Office Organisation" held on Tuesday, October 22, at the Royal Institute of British Architects. Mr. E. D. J. MATHEWS, A.R.I.B.A., presided.

We take the following extracts from the speakers' remarks :—

MR. P. BURNETT, F.R.I.B.A., said : The source of income of a practising architect is, of course, the R.I.B.A. scale of fees. The standard R.I.B.A. scale, so far as percentages are concerned, is the same now as it was before the war. The only alteration has been in respect of the time charges. But the cost of building has more than doubled, so that superficially it would appear that for a given amount of work a practising architect is getting twice as much as before the war. That is a very superficial argument which has been used against the R.I.B.A. by Government departments in the discussions on scale of fees, and actually will not stand up to examination at all for reasons I will explain.

The first reason for the difference is that most of the work that is going on to-day is not being carried on under the standard scale of the R.I.B.A. at all, but under special scales. Before the war most of the work in the hands of private practising architects was done under the R.I.B.A. standard scale and carried its 6 per cent. Nowadays most of the work which is going on, such as housing, multi-storeyed flats, conversions, war damage and other work, all have their special scales which are substantially below the pre-war standard scale of fees; so for that reason alone it would not be correct to say that the cost of building has brought about a doubling in the fees of a practising architect. However, I do not think that is the most important reason.

The most important reason to my mind is the time factor. Architects are finding to-day that to carry a job through from the time it comes into the office until it is completed takes much longer than it did before the war. Before the war experienced practising architects knew within a certain margin how long a job would take to run through. To-day, I am afraid, in many cases we must have no idea.

Double the Time

I would say, in my experience, that the time taken now from when a job comes into the office until it is completed is at least double that taken for a similar job before the war. That means, of course, that every job has to carry its overhead charges at post-war rates for a very much longer period and has upset the ratios which most of us knew before the war between our overhead charges and our total fees.

A third reason, perhaps not quite so important but at the same time a nuisance, is the fact that whilst local authorities and Government departments are quite willing to enter into contracts under seal with private practising architects to pay fees at certain stages, when those stages are reached and the architect submits his account, he often has to wait a long time to get it paid. Taking all those things together, there cannot be any doubt that the practising architect to-day, so far as earnings are concerned, is very much worse off than he was before the war.

How much worse off is he? That is not an easy question to answer, but we can get some guidance if we look at the ratios between overhead charges and total fees. Of course, ratios of that character were never constant. They varied from practice to practice according to the organisation, according to the job of work, according to the volume of work and so forth, but taking a reasonable period of years before the war and taking a number of practices, I think it would be fair to say that before 1939 for the moderate size architect's practice, excluding surveying work, overheads were something like 35 per cent. to 40 per cent. of the total fees received.

Let us look at the position to-day. Speaking from the point of view of my own practice and that of other architects with whom I have discussed this point, I find that most of us are having to pay overhead charges amounting to at least 60 per cent. of our total receipts. If we like to carry this argument a little further and see what it means in cash, we arrive at some interesting conclusions.

For every £100 net that a practising architect earned before the war, he had to take then something like £160. To buy the same amount of goods to-day that £100 would have bought before the war would involve something in the nature of £200. To take £200 net to-day on the revised ratio about which I have spoken means that that architect has got to take gross over £500 in fees. That is without the question of taxation. Therefore, although the cost of building may have doubled, the takings of an architect, to be in the same position as he was before the war, have got to be more than trebled. Anybody who is clever at arithmetic and who desires to apply taxation to those figures will arrive at even more astounding conclusions.

The Situation.

Those are the grim facts that a man re-establishing his practice to-day has got to face up to. He has got to realise that any experience he had before the war goes by the board so far as the relationship between his net earnings and what he may take in fees is concerned. Nevertheless, he has got to get his practice going. He has got to finance it in some way.

Of course, finance is one of those terms which suggests a certain amount of wizardry with regard to money, but what it means to you and me is borrowing, and that is what we have to look at. There are three main sources or possible sources open to architects for borrowing, and I want to look at each one of them, pointing out what they cost, and then give some indication as to how safe it is for a practising architect to borrow.

The first source of borrowing is, quite obviously, the bank. The cost of borrowing from the bank is usually 5 per cent. You may be lucky and get it for 4½ per cent., which sounds high in relation to rates of interest on Government stocks and things like that. Actually, it is not so high as it sounds, because provided you are borrowing only for the practice, the interest you pay is chargeable against profits for income-tax purposes.

The second possible source of finance is, of course, the architect's own personal investments or savings, but it is worth while considering it in relation to borrowing from the bank.

If an architect has investments and sells them to finance himself, he loses the whole of the interest on those investments immediately. If, however, he lodges those investments with the bank and draws against them up to a fixed sum, he pays interest only as he draws on the money.

Also, the cost of using your own investments for borrowing purposes depends, of course, entirely upon what interest or dividends such investments brought in. They may be expensive to use for that purpose, or they may be nice and cheap and save you money. That point I mentioned has to be borne in mind, however; once you sell security to finance your practice you lose the whole of the interest.

A third possible source of finance is a friend or relation. Many a young architect has founded a practice on borrowed money from a friend or relative. At the same time it is best avoided. Your friends and relations are probably your clients, and it never does to borrow from a client. I would raise one point of criticism about the scale of fees, if the Chairman will permit me to mention it. Before the war the R.I.B.A. scale did provide for the payment of a portion of fees—one-sixth, in fact—on completion of the sketch plans and approximate estimates. I know that very few architects asked for any fees at that stage; they waited until the contract was entered into and then asked for two-thirds. It was probably not of great value before the war when a job went through quickly, but with jobs going through slowly, as they do to-day, that clause is of the greatest value, and I cannot but regret that it has not been carried forward into any of the special claims for work going on to-day, which has been agreed with Government Departments, and so forth.

Value for Money.

MR. A. M. CHITTY, F.R.I.B.A., said : I think that perhaps the first duty of an architect is to give value for money to his clients. That is very obvious, but in order to give value for money, clearly one must know what the value is at which an architect is aiming, and what the value is by which the client will judge. One can only assess that, I think, in terms of analysis of time related to costs.

Every architect will agree, I feel, that jobs carried out vary greatly in their profit-making capacity. There are jobs which are obviously unpaying but which one continues to do and upon which one continues to spend quite a lot of time quite uneconomically for a number of reasons. One may spend time on a very small job and endeavour to do it as perfectly as one can with some other motive in view which is quite justifiable, namely, that of producing from the same client later on a million-pound job. Then there is the difference between jobs by nature of the actual scope of the buildings. In my own practice we found that industrial buildings may carry one proportion of overheads in relation to fees taken, whereas another one may have a very much lower or higher proportion.

I am not sure that I should agree with Mr. Burnett about his pre-war figure of 35 per cent. to 40 per cent. as an average. I should have said that something nearer 55 per cent. was the order of the day. Of course, this may be due to various reasons, one of which may be inefficiency, but I think it is clear that some classes of work will be quite different. You may get a job where there is a degree of repetition, where your overheads may be comparatively light and profits therefore greater. You may find domestic work, which is probably most costly of all architects' work—that is to say, the design of a two-thousand-pound house for a new client. This may be totally uneconomical. We used to find before the war that we had

to ration ourselves to so many houses of this kind in a year and try to balance them against the more lucrative work. That is reasonable. The two-thousand-pound house for the new client is an extremely complex and difficult problem. For this small fee—according to the scale at 6 per cent.—say, £120, one has to spend a very long time investigating the way one's client lives and find out what his problems are, and then interpret all that in terms of planning. I think if this problem is solved in a particular case, the cost will be extremely high.

Then I have no doubt that the most costly work of all is work in London upon housing at the present time, with the innumerable difficulties, legislative, technical and procedural, which surround one the whole time.

Therefore, one has straightaway to try to apply some critical ability to this problem of seeking which type of job one is wanting. Obviously there are dangers in specialisation. If one happens to specialise in a particular class of work which at present is extremely difficult or is demanding a low fee for any reason, then that person will be at a disadvantage.

A Further Difficulty.

Then I think there is a further difficulty which is, perhaps, supplementary to the point Mr. Burnett mentioned about the amount of work that has to be done to-day. I know of architects who find it necessary to employ staff which was not required before the war. Perhaps a man has to be employed to keep close contact with Government Departments in order to ensure that answers to letters are received at the right time. Perhaps a man has to be employed whose sole duty it is to do part of the builder's work, or what before the war would have been considered builder's work. It is this necessity for extra staff which all tends to support what the last speaker said about increased costs involved in running an office to-day.

Right from the beginning one has to consider one's choice of work. Obviously, when one is starting one has less choice and is less able to reject work which is not desired. I remember, before I trained as an architect, going to a very distinguished man now dead, who himself was an architect, and he assured me that to be an architect was an uphill voyage all the way. Well, I think he was quite right, although I was not so sure at the time. Presumably, as one moves up the scale one can become more selective in that way, but in order to enable one to find out which types of work are more costly than others it is necessary to bear in mind that time is probably the one single item which is more important than anything else in the office. One can assess the cost of any job on the basis of so many man-hours at wages of those engaged upon it, plus some record of time allocation for overheads, rent, rates, cleaning, and so on, and by keeping a diary of each job find out how this works out in practice.

That, I think, is very obvious, but it is very easy to overlook the necessity for it, and I can give you one small example. We had a job a little while ago for which we thought we should have one hundred drawings all with the same title on them. We obtained a hundred sheets of tracing paper with the standard lettering at the bottom, with the standard border and the usual titling, and the bill for these sheets —they were of the cheapest type of paper obtainable—amounted to about £7 10s., or 1s. 6d. per sheet. Now at first glance it occurred to me that that was very expensive, and it seemed a large sum to pay for so simple a procedure when we could have bought our own paper and stencilled it. If, however, it is worked out in terms of somebody working in the drawing office at, say, £10 a week, it will be seen that if he spends half an hour on that particular job of lettering one sheet, 5s. has gone bang! So I think that shows quite clearly that one has to look into it very carefully to weigh up the merits of the two ways of doing it.

With regard to this question of the amount of work accounted for by a proportion of fees at different stages of the job, the R.I.B.A. scale which suggests by implication that two-thirds of the work has been done by the signing of the contract was, I suppose, a correct assumption before the war, and from that one estimated the remaining one-third was to cover the cost of executing the job Clearly the weight has completely shifted now, and the execution of the job takes up far greater time and energy and far greater cost than the preliminary stages.

Keeping Records.

MR. B. J. M. BOYS said : I agree that it is desirable to keep records of some sort. They need not be very complicated. The object of any financial records must, in the first instance, be to tell you where you are. Mr. Burnett has told you that you have got to have a certain amount of money to start with, and under present conditions that amount of money has to last you rather longer than it might have done pre-war for two reasons. The first is that everything costs much more than it did, and the second is because you have to wait much longer now for money.

Clearly if you are starting in practice you have got to plan out where the money which you have to start with is going in order that you may see how long it will last. Your records should be designed to enable you to see how the actual transactions which are passing through the office compare with that initial budget, which is very important. One knows or can estimate what one's commitments are, and one should see that the actual expenses and the income which is expected do in fact come in or go out more or less along the lines provided for when the practice was started. That is rather a question of comparing the total figures which can be extracted from the books periodically with the total one will have provided to start with, and the records should be arranged in such a way as to enable those comparative figures to be obtained quite easily.

For the man or woman who is starting, the pass book probably tells a story and gives a pretty clear picture, but it does not give the whole picture. It cannot do so because it only records past transactions and gives no indication whatever of transactions which have got to be dealt with in the future. Something rather more than one's cheque stubs and paving-in book is therefore needed. As a minimum I would suggest that one needs a cashbook with some analysis columns on both sides, and a petty cashbook which will record transactions rather smaller than those for which it is necessary to draw directly from the bank. In passing, one might suggest that a petty cashbook is of very much more service for obtaining a total survey of one's outgoings if it is run on the imprest system.

Record of Accounts Sent.

Another thing which is required is a record of the accounts which are sent to clients. It need not be a book; it can be a file, but it should be a separate file to the bills actually sent and should be compared periodically with the cashbook in order that those accounts which have been paid can be marked off. It enables you to see quite clearly the accounts which are still owing to you. As the practice grows that probably will not be sufficient and you will have to open a ledger account, but the principle is the same.

There is nothing frightfully mysterious about double entry; it is the only system to ensure accuracy. While one is in a small way, one can achieve the same results without making a debit and credit, however, by adopting the methods I have suggested.

Another thing I regard as very important is the keeping track of one's commitments, because that is a thing which one has to take into account before one starts at all to see how long the money is going to last.

If you have the prospect of more work you have to start paying expenses immediately and have to wait for a return, but that is where our old friend the budget comes in. By having a proper budget you should be able to go forward with greater confidence on any programme of expansion necessitating extra staff, etc., than if you were merely speculating. Although I think it is not perhaps within my province, it is true to say that it would be false economy not to take on extra staff even if it meant a little financial strain provided one could see in due course that it was going to be remunerative. Clearly the more time one has free oneself to develop ideas and make contacts the better, and if one is not going to be cash out of pocket by employing somebody else, I think it is the right thing to do.

DEVELOPMENT OF SIERRA LEONE

An outline of the 10-year plan for the development of Sierra Leone was published in April (Sessional Paper No. 4, 1946). The plan was formulated with the assistance of a development and planning officer, a development council for the Territory and Regional Committees for the Colony and the Protectorate. The Outline contains proposals for the expenditure of £5,256,575 over a period of 10 years.

In the programme the following are included: railway traffic and engineering surveys; increased airfield services; 290 miles of new trunk roads; a deep-water quay at Cline Town; new post office and telegraph facilities; office and equipment for survey departments; irrigation and rice development; improvement of agricultural methods and tools; stations for improvement of livestock; research into pests and diseases; prevention of soil erosion; survey of forests and possibilities of increased saw milling; purchase of trawlers for deep-sea fishing; establishment of co-operative societies; grants and loans for the development of certain local industries; extension of hospitals, clinics and dispensaries; development of water supplies; appointment of town planning officers; increase of educational facilities at all stages; appointment of assistant welfare officer; extension of Labour Department activities.

OBITUARY

Charles Gerald Eve, P.P.S.I.

WE regret to record the death, at Thursley, Surrey, on Tuesday, of Mr. Charles Gerald Eve, President in 1932 of the Chartered Surveyors' Institution. Born in 1872, Mr. Eve was educated at Dover College and Bedford School, and was then articled to his father, being elected P.A.S.I. in 1894 and Fellow in 1901. He was President of the Rating Surveyors' Association in 1923.

STANDARDS FOR SCHOOL FURNITURE

A POST-WAR BUILDING STUDY

STANDARDISATION of school furniture and equipment is the subject of a report* issued by a Ministry of Works sub-committee. Known as the School Furniture and Equipment Sub-Committee of the Ministry's Standards Committee, this body was appointed in 1944 following discussions between various Government Departments and manufacturers of school furniture. The terms of reference were: "To make recommendations for the standardisation of materials, components, furniture and fittings in school buildings."

The report divides the subject into four categories: (1) Articles generally agreed as suitable for standardisation to obtain the benefits of large-scale production; (2) articles, not peculiar to schools, which may be obtained in the open market or ordered on standard specifications prepared for other or general purposes; (3) articles for which standard types would have no wide application or which should be specially designed for the needs of individual building schemes; (4) items which for various reasons should not be standardised at present.

Interesting experiments for determining the best shapes for school chairs are described in an appendix.

This report does not contain the actual specifications; these will shortly be issued as technical documents by the British Standards Institution. It is intended as a non-technical explanation to all interested in school design and equipment of the nature of the work undertaken by the Committee and the objects in view.

Copies have been circulated to Local Education Authorities by the Ministry of Education.

In the course of a note on the report, MR. JOHN H. MARKHAM, F.R.I.B.A., chairman of the Schools Sub-Committee of Standards Section, M.o.W., writes as follows:—

Standardisation may be considered as a prudent use of resources to obtain uniformly good results. Prudence of this kind has become more essential than usual in the present conditions of stringency and shortage of labour and materials. There has been a tendency to carry these ideas to excessive lengths; and this has produced distrust and dislike of standardisation in many quarters.

The Committee responsible for the application of standardisation of school furniture and equipment seem to have been well aware of the harmful effect of going too far, and there is evidence that they have avoided mistakes of this kind. In the first place it is asserted that æsthetic considerations have always been kept in view in the standards which have been prescribed; but as far as is possible freedom has been left to the designers, so that the articles produced may not be of one uniform pattern but may show the æsthetic characteristics considered appropriate by individual designers. The Committee have, in fact, restricted their recommendations to insistence on the essential form and dimensional features of the objects and the materials and constructional methods which are essential if good results are to be obtained.

A further evidence of the wise restraint exercised by the Committee is to be seen in the fact that they have not standardised certain articles of equipment because it is considered we are still in a period of experiment and development, and there is not yet sufficient agreement amongst experts as to the best types.

We are also reminded that the specifications will be subject to revision from time to time so that new ideas and new materials may find their place in the standards as soon as they have proved themselves to be satisfactory for the purposes for which they are intended.

It should be borne in mind also that the adoption of standard articles is not compulsory, though the aim in preparing the specifications has been to prescribe what has generally been agreed to be the best form and type for each article, and to indicate the way in which articles conforming to these forms and types may best be produced with the means and facilities at the disposal of manufacturers.

Those who may be disposed to have school furniture specially designed for each building and not use mass-produced articles conforming to an accepted standard may nevertheless find in these specifications valuable and authoritative information as to what—from a practical point of view—have been found to constitute the most suitable size, shape and conformation of the various articles, and they would be well advised to be guided by these in preparing their own designs.

It has evidently not always been easy to strike a balance between preparing a specification which will give the best results in normal times and on the other hand a specification which is realisable under present conditions of shortage and stringency.

The Committee have endeavoured in the specifications not to sacrifice essential requirements on account of present difficulties; but in times of peace and plenty the designer of furniture may be able to give a more generous and substantial appearance to the articles in question than is possible at present, the essential requirements being maintained under all circumstances.

In this connection is is important not to overlook a notice which has been inserted after the printing of the brochure. This notice draws attention to the fact that for the present it may be impossible to supply some of the articles in full conformity with the standard specifications in the quantities urgently required within the next year or two. This has necessitated action on the part of the Board of Trade to arrange for manufactured articles which, though not conforming in all respects to the standards laid down, do, nevertheless, as far as possible, comply with those prescriptions which may be considered of first importance in that they affect the comfort and well-being of the scholars.

This, it would seem, applies in particular to chairs which have been made the object of a very special study by the Committee on the basis of tests carried out under the personal supervision of the medical representative of the Ministry of Education. These tests are briefly described in the appendix to the brochure. They are of a very sensible and convincing type, designed, as they were, to fix shapes and sizes of chairs that would as closely as possible fit the physical conformation of the scholars of different ages. It is considered that chairs designed in this way will not only make for that measure of comfort which will discourage restless movements, but will also tend to bring about naturally a becoming posture for class work.

The publication now made is intended in an entirely non-technical form to explain to all interested in school design and equipment the nature of the work undertaken by the Committee, the objects they have had in view and the limitations which they have imposed upon themselves. It would certainly appear that a very important step has been taken towards the production and supply of the best types of school furniture and equipment; and if the promise that the specifications will be revised from time to time is fulfilled, there is every prospect that the equipment of schools in future should be of the best types which industrial resources can produce whilst conforming to the accumulating experience of those directly in charge of the education of the young.

* "School Furniture and Equipment," Post-War Building Studies No. 24, published for the Ministry of Education and the Ministry of Works, by H.M. Stationery Office, 6d. net.

CORRESPONDENCE

Old Westminster Hospital Site.

TO THE EDITOR OF *The Builder*.

SIR,—We refer to the comments in your issue of October 18 on the Government's decision to build a new Colonial Office on the above site. In justice to private enterprise we would like to let your readers know that, as owners of the site, we appreciated that it is the most important in the Empire and its ownership and development worthy of the very best.

We therefore appointed Sir John Burnet, Tait and Lorne—who had carried out previous schemes for us and are in the first rank as architects—and asked them to produce the best scheme possible for a new building.

When the American Government invited the writer to visit Washington to give two talks to the heads of various departments on building in Britain, we asked them to reciprocate by putting us in touch with the best practice in the U.S.A. for heating, ventilation and acoustics, so that we might make use of their experience in this building.

We instructed Messrs. Albion T. Snell and Partners as our consultants for heating, ventilation and sound resistance, and who had already advised us very successfully on these points, to give effect to the best practice in the new building. We also engaged Mr. P. J. Waldram, F.S.I., and he calculated the light for every part of every room. The work of these specialists ensured that each worker would be working under conditions of comfort and health. Mr. S. Bylander was appointed to design the engineering structure of the building.

The architects and consultants spent two years in the preparation of the scheme, and produced elevations approved by the Fine Art Commission, and completed plans which were finally approved by all the authorities concerned. Messrs. Young and Brown, chartered quantity surveyors, had begun their work in the preparation of the bill of quantities.

As far as we are concerned, but for the intervention of the war the new building as designed and approved would have been erected, and we would have had a building of which we, as owners, would have been justly proud. While the building would have been occupied by private firms, the inquiries we had for occupancy were from firms and corporations of national repute and standing. Therefore, everything was done with a real sense of our responsibility as owners of the site.

While it is a great disappointment to us that after long years of work we should not have the privilege of proceeding with this scheme, we are glad that there will still be a worthy building on the site.

J. W. LAING.

London, N.W.7.

BUILDING THE NEW TOWNS

A WARNING FOR THE FUTURE

THE warning that unless local authorities were influenced along the right lines suburbs would continue to appear where green belts ought to be preserved was expressed by MR. F. J. OSBORN when he addressed a lunch time meeting of the Town and Country Planning Association, held in London recently.

Mr. Osborn, who was speaking on the subject "Building the New Towns," said: "Many more new towns are needed than the programme so far contemplated. For a long time ahead, unless we can greatly increase our influence, and spread it into areas where the authorities still fail to understand or approve it, suburbs will be built where green belts ought to be preserved. Attempts will still be made to maintain in big cities densities higher than is socially desirable or will ultimately be willingly accepted; the planning profession itself is still far from firm on the maintenance of a national standard of maximum density—which is as essential as a standard of purity in water supply, or a standard height in rooms. Opportunism may still place the new towns too near the fringes of big cities or each other. The pressure of acquisitive local authorities will tempt the Ministry to resort to 'infilling' or the expansion of towns unsuitable for expansion, when new foundations will be better. The understandable fears of defenders of agriculture may still combine with less worthy impulses to keep new towns out of areas where on a full balancing of considerations they could be best sited, and the two may combine with the imperialism of backward municipalities to impose flat-building or sprawl where dispersal would be right.

"There is no doubt that the Ministry of Town and Country Planning and its regional officers are well aware of these dangers. There is no doubt that in the past year planning authorities and officers have grown in authority and competence. But the candid ones among them would admit 'off the record' that they are not yet by any means sufficiently accepted as the arbiters of land-use.

"I do not want to paint too black a picture. It must be remembered that before the war there was no real attempt to guide the location of industry at all; nor to limit suburban expansion and preserve green belts. The leap-frogging of industry and houses on the fringe of London, for example, went on unchecked, and planning was only able to impose on it some degree of local orderliness. Under the new dispensation, at the worst, the leap-frogging is transferred to the fringes of smaller cities. The broad effect is rather less harmful. It is more important to stop the further growth of a nine-million conurbation than of a one-million conurbation."

A Greater Understanding.

The speaker then referred to the Reports of the New Towns Committee, the New Towns Act and the instances where the Act differed from the recommendations of the Reports. He then continued: "If we are to get good towns under the new planning—as we never did under non-planning or authoritarian planning—I see no solution except a far greater understanding of the problem by a much wider portion of the public. If there is a public reasonably educated in these affairs, which are their own affairs primarily, then it will be possible for planners to satisfy it—though, in my opinion, there will be a need for constant reminders to the experts, by bodies like our own and by other agencies of opinion, of what the public wants.

"There is a two-way process here, in which I think the Association could, if it has the membership, the enthusiasm and the energy, play an extremely useful part. But, whoever does it, the job is an indispensable one. Unless it is done, the new towns may be interesting essays in 'what good people think good for people,' exciting stages for the atelier-pranks of spirited young technicians, or royal forests for the pursuit of such noble game as 'the organic community' or 'the great society' or such smaller fauna as smoke abatement, perfected street lighting, district heating, omnivorous dust-chutes, or cerebral culture. They will not be good all-round towns, which must include all these things and many more of which specialists are less conscious."

HOUSE PRODUCTION

METHODS AND COSTS

SPEAKING to the Housing Centre, London, on October 15, on "Some Aspects of the Present Housing Situation," MR. IAN BOWEN, of the National Institute of Economic and Social Research, said there were three objectives in the post-war housing programme. The first was the provision of new homes at reasonable rents, the second the reconstruction and improvement of existing dwellings and the raising of housing standards generally, and the third objective, which was the most important of all, was the reform and reorganisation of the technique and machinery of the building industry so that it could achieve the other two objectives.

He went on to say that the target figure for new house building was 400,000 houses a year or 33,000 a month, completed. In order to achieve that figure the building industry must overhaul itself or be overhauled from outside. Progress towards the target figure was so far lamentably slow. The highest monthly rate of houses completed was 5,100, in July last.

Comparing the number of houses begun by a certain date with those finished later, it was possible to ascertain how long it was taking to complete houses. Mr. Bowen gave the following statistics of houses begun during the five months April to August this year:—April, 19,000; May, 22,700; June, 18,600; July, 22,000; August, 20,700. More and more houses were under construction each month but they were not being finished as fast as one would like. Under private enterprise some 2,800 to 3,000 houses were being completed each month, on the average, under local authorities' schemes, 1,500 to 1,800. Nearly 15,000 houses had been completed by private enterprise by the end of August, nearly 8,000 by local authorities by the same date.

It was taking private enterprise something like eight months, on the average, to build a house but from twelve to eighteen months for local authorities. That, at any rate, was the rate of building to-day. With the cutting down of private enterprise schemes by the Government, however, more and more new houses would be begun each month by local authorities in comparison with those begun by private enterprise.

He believed houses would be building at something like 20,000 a month by the middle of next summer and by the end of next year we might look for 220,000 to 250,000 houses completed. By the middle of 1948 we might expect the target figure of 400,000 houses finished each year being attained. By then there would be the 400,000 houses built that year plus the 220,000 to 250,000 houses built by the end of next year and any other additional houses that might be finished next year.

That achievement would be very considerably better than the rate of building after the 1914-1918 war. On top of that we were getting an even better programme in five years after the last war than in eight or nine years after the previous war.

Referring to the planning for the post-war housing programme which was put in hand during the war, particularly in 1944, MR. BOWEN said that the planning for a labour force for the industry had been successful, too successful in some ways. This was to some extent due to the tremendous demand for building labour which arose in the London area as a result of the flying bomb attacks. Small firms had doubled and trebled their labour force. Therefore, housing got off to a good start as far as labour was concerned. The building materials industry, however, was by comparison left in the lurch, and not all the enormous increase in the building industry labour force went into housing. Was not labour, on the whole, being used wastefully in the housing programme?

Coming to costs of housing, Mr. Bowen said that the permitted overall cost of houses was being kept down by the Minister of Health, yet at the same time there were very rapidly-rising labour costs, due to wages going up and labour costs on the site also increasing, due partly to slacking by the men but also to hold-ups in the supply of materials to the site.

The productivity of labour was lower than before the war. It was taking something like double the number of man-hours to complete the houses, even in the most efficient schemes. One could only wonder at any building at all going on within the maximum permitted selling price. There must be all sorts of dodges being used to keep the cost within the maximum selling price.

The Government would have to face the fact that costs were very high. Only in so far as the industry could be persuaded to use more efficient methods could the high costs be reduced. He thought the high wages were rather a good thing. The great advantage of high wages was that they compelled builders to try to improve their methods and use more mechanisation. In that way we might make more rapid improvements in methods of building. Mr. Bowen said he was sure the Government policy of encouraging the 11 permanent prefabricated types of houses and the several other types which were being investigated was the only way to get the industry to adopt methods which were adopted by other industries years ago.

Urging the building industry to reorganise and rationalise its planning which it based on the old methods used in traditional type houses, Mr. Bowen said the urgent need was to "programme" raw materials in relation to the demand and to rationalise the Government building machine itself. Even now the setting up of a Ministry of Housing would be a great improvement and would eliminate a tremendous amount of delay.

MR. BOWEN also advocated the introduction of some form of bonus scheme within the building industry and concluded by saying that there must be improved methods of site organisation, which should be broadcast to the industry.

IN PARLIAMENT

Electric Domestic Appliances.

In reply to MAJOR PETER ROBERTS, MR. WILSON said that the stocks of domestic electric appliances held on October 2, 1946, for temporary houses were: Coppers, 5,213; wash boilers, 4,624; immersion heaters, 8,437; refrigerators, 727. No stocks were held for other housing schemes. These numbers represented at the most about three weeks' requirements at the present rate of construction.

Overtime Working.

SIR DYMOKE WHITE asked the Minister of Labour whether he was aware of the desire of many building workers to be permitted to work overtime on house-building contracts at the present time in order to expedite the erection of houses; and whether arrangements could now be made to relax the present restrictions on overtime working in the house-building industry.

MR. TOMLINSON said that overtime working was subject to the Industry's National Working Rules which made provision for cases of urgency.

Private Enterprise Housing.

MR. ROYLE asked the Minister of Health if he was prepared to consider making regulations to compel the sale of all new houses, built by private enterprise, through the local authorities.

MR. BEVAN said that conditions as to the sale price of houses were included when licences were issued and safeguards for their observance were provided in Sections 7 and 8 of the Building Materials and Housing Act, 1945. Local authorities had, in addition, power to purchase houses and, further, could make arrangements for the erection of houses for them by private builders who were not able to undertake contracts on the usual basis. These provisions should ensure the object which Mr. Royle had in view.

Building Materials.

COMMANDER GALBRAITH asked the Minister of Health if he would state the authorised increase in the cost of building materials since the original ceiling price of £1,200 for privately built houses was fixed and what percentage increase this represented.

MR. BEVAN said that different rates of increase had been authorised for different materials at different times, and no exact figure could be obtained which would reflect the variable factors involved. He was advised, however, that increases authorised since June, 1945, in the cost of materials used in a typical house might be estimated as approximately 8.5 per cent., which represented approximately 4.5 per cent. of the building cost.

Refrigerators.

MR. MURRAY asked the Minister of Health how many refrigerators had now been installed in occupied prefabricated and permanent houses; and what were the prospects for further installations in both types of houses.

MR. KEY said that about 24,000 refrigerators had been installed so far in temporary houses in which they formed a part of the equipment. The Minister had no information as to the number installed in permanent houses and the extent to which they could be installed in the future would largely depend on general supply.

District Heating.

In reply to SIR WAVELL WAKEFIELD, MR. GAITSKELL said the Government were doing all they could to encourage and foster the extension of district heating, and machinery had already been set up for considering schemes prepared by local authorities. Two schemes had been approved, others were under consideration, and many more were known to be coming forward.

Plasterboards.

LIEUT.-COLONEL SHARP asked the Minister of Works what action he was taking to increase the supply of plasterboard and the allocation made for use in housing.

MR. TOMLINSON said that two new plasterboard factories were now being erected, and extensions and alterations were being made to existing plant. By the middle of next year it was expected that production would have increased by nearly 50 per cent. above its present level. Special allocations of plasterboard were made for temporary houses and permanent prefabricated houses and for war damage repairs. Most of the balance was available for the ceilings of traditional houses for which supplies of hardboard, insulation board and lime plaster were also available. About 100 square yards of plasterboard were needed for the ceilings of a normal three-bedroom house.

Certificates for New Undertakings.

MR. DUMPLETON asked the Minister of Works how many applications on Form CRO29 were received by his department during the period May 1 to August 31, 1946; how many certificates to master builders were issued in the same period; and what steps were taken to ensure that these applications were bona-fide.

MR. TOMLINSON said that 22,909 applications were received on Form CRO29 between May 1 and August 31 this year, and 11,850 certificates were issued during the period to master builders. There was now no control of entry to the industry, but applicants on Form CRO29 certified that they intended to set up an undertaking. Certificates were withdrawn if no undertaking was set up.

Aluminium Houses.

MR. GAMMANS asked the Minister of Health what was the estimated total cost of the erection of the new aluminium houses, including site and services; at what rent they were to be let; and, on the assumption of a life of 10 years, what would be the average capital loss to the British taxpayer.

MR. BEVAN said that the estimated cost to the Exchequer of providing and erecting the aluminium temporary bungalows was £1,365 per house. This figure covered site preparation (excluding the cost of land, roads and sewers, which was met by the local authorities), supply of hulls, erection, and provision of components and fittings. These houses, when erected, were let and managed by the local authorities as if they had been provided under the normal machinery of the Housing Acts. Assuming a life of 10 years, the estimated average net cost to the Exchequer would be £1,160 per house, but from this figure would fall to be deducted any sum realised from the disposal of the structure, fittings and components.

Building Materials Stocks.

MR. J. LEWIS asked the Minister of Health if he would make provision for stocks of building materials held by local authorities to be utilised not only for property owned by the municipality, but also for repairs to all dwellings where the health committee concerned was of the opinion that it was essential that repairs be carried out, and issue licences according.

MR. BEVAN said that arrangements were already in force to facilitate the release of materials for repairs which were either required by Statutory Notices or were certified by the local authority as being eligible for priority. Those facilities applied equally to privately owned houses and to those owned by local authorities.

MR. MARPLES asked the Minister of Works what builders' materials he had in stores surplus to his requirements which could now be disposed of throughout the building industry.

MR. TOMLINSON said that his Department took over responsibility for building materials declared surplus by other Departments, and disposed of them, as a continuous process. Goods were disposed of where they stood, and were not taken into central Ministry of Works' Depots. According to circumstances, they were either offered to local housing authorities; sold by public auction; or disposed of to *bona-fide* merchants. The lists of goods for disposal were prepared locally. So far as his own Ministry's stocks were concerned, in general purchases were made to meet current requirements only. Should surpluses become available they were immediately disposed of.

The 1951 Exhibition.

MRS. AYRTON GOULD asked the Prime Minister if he was aware that considerable apprehension was felt that the amount of labour and material required to erect and equip the projected 1951 exhibition would seriously retard essential building and production; and if he would give an undertaking that the House would be given an opportunity to debate the matter before any final decision was made to hold an exhibition in 1951.

MR. H. MORRISON, Lord President of the Council, said he was aware of this problem, which was at present being given detailed consideration by the Departments concerned. As regarded the second part of the question, no doubt an opportunity of raising the matter would occur in the normal course of business.

Welsh Slate Industry.

Replying to MR. POOLE and MR. GORONWY ROBERTS, MR. TOMLINSON said that he had received the report of the Committee of Inquiry into the Welsh Slate Industry, which would be published as soon as possible. The report was being carefully studied and he was not yet in a position to make any statement regarding the industry as a whole or particular quarries.

Boys in Training.

MR. KENNETH LINDSAY asked the Minister of Education how many boys were now undergoing full-time training preparatory to entering the building industry; and what were the relevant and comparable figures for 1938.

MR. HARDMAN said it was not possible to supply the hon. Member with accurate figures, but the closest estimate was 13,250 in May, 1946, as compared with 1,000 in 1938.

A BUILDER LOOKS AT THE WORLD

LONDON PRESIDENT AT SCOTTISH ROTARY CLUBS

Mr. E. W. Garrett, President of the London Master Builders' Association, was the guest of honour of the Rotary Clubs of Edinburgh and Glasgow during a visit to Scotland last week, in the course of which he was entertained to dinner by the Scottish National Building Trades Federation. Mr. Garrett was accompanied on his tour by Mr. G. H. A. Hughes, Director of the L.M.B.A.

Speaking at the Edinburgh Rotary Club, MR. GARRETT said that the building industry to-day was doing as good a job of work as the circumstances of the time permitted and that the quality of that job was steadily improving.

The Government [he continued] makes great play with the number of families it has re-housed since the end of the war and the number of new houses now built or building. Who built those houses? Not the Government. Not the local authorities, except in a very few isolated instances. No. These houses were built by the building industry of Great Britain, and it is a record of which any industry may be proud.

Problems of the Future.

There are great problems before the building industry to-day, just as there are great problems before every other industry. And they are not to be solved by slogans. What is to be the organisation of the building industry in the days to come? Will the employer and operative relationship continue? What are to be the incentives under a system of full employment? Is the builder or the architect to be the boss? Where does the engineer, who is a bit of both, come in? One of H.M. Ministers has himself propounded that question very recently. And there are many others to which I cannot give you the answers to-day.

The building industry is deeply concerned in the matter of production. Early this year we made an agreement between the employers and operatives for substantially improved conditions, chiefly by way of an increase in wages on the assurance that the Unions would take a definite responsibility for greater output. Generally speaking, there has been little improvement, and we are now faced with a demand for still higher wages, which is bound to increase the cost of building. We should not be fair with the public if we gave this until we could be assured of some return from the workers.

Inspiration Wanted.

We have a great educational task before us to bring about once more a realisation of the fact that the privilege of being a citizen of this country carries responsibilities with it, and that we must look upon our job, whatever it may be, as a means of serving the community. Employers should do all they can to inspire something of the old feeling within their firms that we are working together as a team to do a job of service to our country as we did during the war, putting that first rather than the question of reward.

It is always dangerous to prophesy, but is it too much to look forward to happier days when freedom shall once again have returned to the land, when instead of building to order we can build for the sheer joy of building? You have many fine buildings in your magnificent city, buildings which express the spirit of the times in which they were built, buildings which have withstood the ravages of the

centuries. But is there no room in Edinburgh for more fine buildings, which will be remembered as 20th-century buildings when we have gone? These are the buildings which every true builder looks forward to building one day. But utility must precede luxury. To-day we are still at the utility stage. Dull, drab, uninteresting from our point of view, until one looks behind the shell and sees the happiness that shell has brought to the thousands of families living in its shelter.

"He built better than he knew." When the time comes to write it I believe that will be the epitaph on the builder of to-day. I shall certainly be content if it is mine. For he is building in a race against time, a race to provide homes for the people, homes in which the new generation, on which so much depends, can live their fuller and more contented lives in this century of the common man.

A Wages Warning.

SPEAKING at the Glasgow Rotary Club, MR. GARRETT said that service to the community was alike the aim and ideal of the Rotary Club and of the trade association. This had been proved in his own experience by the activities of the London Master Builders' Association, which had not been confined to bettering the lot of its members, but had resulted in better service to the community and better conditions for the labour it employed.

During my term of office, said Mr. Garrett, I have been impressed by the way in which three or four of us can meet three or four of the operatives' leaders quite informally, and without minutes or records discuss not only what would be best for us as individuals, but best for the industry and the community as a whole. I can honestly say that both sides approach the subject from this angle, and I should deplore anything which would cause a break in these relations which have been so carefully and painstakingly built up by so many men of good will on both sides.

On the present demand for an increase of wages, Mr. Garrett gave this warning:

We have very recently received an application from the operatives for an increase of 6d. per hour for craftsmen and 9d. per hour for labourers. These increases, if granted without exceptional safeguards to ensure that they were entirely absorbed by increased production, would not only increase building costs, but would go some considerable way towards wrecking the financial structure of the country. I hope the operatives will see this point of view before it is too late.

We have given a pledge to the Government that if they will see that we have the materials we will see that the houses are completed. We mean to carry out that pledge.

OFFICIAL NOTIFICATION

Bedpans and Urinals: Purchase Tax.

The Commissioners of Customs and Excise announce that bedpans and urinals of a kind designed for the use of a recumbent patient will not, in future, be regarded as within the charges on pottery-ware, glassware and metal hollow-ware of a kind used for domestic purposes, or on household goods of plastic material. This decision does not extend to chambers, commode pans and similar domestic utensils, which remain chargeable as heretofore.

Five-Day Week.

We are informed by Messrs. Vulcan Products, Ltd., that as from Saturday, October 12, they have adopted the five-day working week.

GETTING MATERIALS TO THE SITES

"SUFFICIENT materials have already been produced to finish the houses included in the 'Finish the Houses' campaign," said ALDERMAN CHARLES KEY, Parliamentary Secretary to the Ministry of Health, speaking at Birmingham last week at the National Housing and Town Planning Council regional conference. "It is now simply a matter of getting the materials on to the sites where they are needed. There are," he said, "two ways of doing this. First, the introduction of a special priority distribution for the sites concerned. The distributors of building supplies have agreed to give special priority to orders for these sites, and there should be no difficulty about obtaining materials promptly, particularly if local authorities are willing to adopt without hesitation, where the traditional materials are not immediately available, such approved substitutes as we have recommended.

"The second way is to introduce special measures to ensure that materials are not frittered away on non-essential work, and we have, therefore, had to insist on very drastic restrictions on licences issued, and are making a determined attack on the building black market."

The speaker emphasised that the Government does not intend to concentrate on finishing certain houses at the expense of others in a less advanced stage. Continuity must be maintained, but at the same time output could be stimulated to achieve quicker completion of houses in an advanced stage. The materials and craftsmen required for the last stages of house construction are, in any case, different from those required in the early stages, so that it should not be difficult to keep the two needs separate.

Sixty Years in Business.

Still actively at work, Mr. J. Gray Buchanan, chairman of William Jacks and Co., Ltd., iron, steel and metal merchants, of Winchester House, Old Broad-street, London, E.C.2, has just completed 60 years' association with the business.

BUILDING MATERIALS PRICES

M.O.W. AUTHORISED INCREASES

INCREASES in the authorised maximum selling prices of bricks and a reduction in the list prices of roofing felt are announced by the Ministry of Works.

BRICK PRICES.

Increases in the maximum prices that may be charged for common building bricks are authorised in two Orders* made by the Minister of Works. The increases came into force on October 23.

The first Order permits:

(1) An increase (in consequence of an increase in fuel costs) of 6d. per thousand in the maximum prices that may be charged for common building bricks produced in any area in the United Kingdom except:—

(i) Northern Ireland;
(ii) The Counties of Durham and Northumberland;
(iii) That part of the North Riding of Yorkshire north of the road from Whitby southward to Pickering; thence westward to Thirsk and thence south-westward to Ripon.

(2) A total increase (in consequence not only of an increase in fuel costs, but following an investigation into the production costs of the manufacturers in the area) of 5s. 3d. per thousand in the maximum prices that may be charged for shale stiff plastic pressed bricks and shale wire-cut bricks produced in a newly defined area called the South Lancashire Area.

(3) An increase of 66⅔ per cent. over the 1939 charge in the authorised additional charge for stacking bricks.

This Order also fixes a range of prices for concrete bricks in areas in which prices were not previously controlled.

Attached to this Order is a schedule specifying minimum and maximum ex works prices per thousand for common building bricks of defined sizes produced in the areas to which the Order applies. This schedule replaces the schedule to S.R. and O. 1945, No. 977.

The second Order permits:

(1) An increase (in consequence of an increase in fuel costs) of 6d. per thousand in the maximum prices that may be charged for common building bricks produced in the Counties of Durham and Northumberland, and in that part of the North Riding of Yorkshire defined above.

(2) An increase of 66² per cent. over the 1939 charge in the authorised additional charge for stacking bricks.

The second Order also reclassifies firms for price control purposes.

The increase of 6d. authorised by this Order in consequence of an increase in fuel costs, together with the increase of 3s. 9d. authorised in S.R. and O. 1946, No. 611, following the negotiated increase in wages last May, increases by 4s. 3d. the maximum prices of common building bricks other than concrete bricks as set out in the First Schedule to S.R. and O. 1945, No. 978.

ROOFING FELT PRICES REDUCED.

The main producers of roofing felt have, under a voluntary price agreement with the Ministry of Works, reduced by 10 per cent. their list prices of roofing felt (other than reinforced felt and dampcourse), the reduction being operative on all dispatches from September 1, 1946.

* S.R. and O., 1946, No. 1,692: The Bricks (Range of Prices) (No. 1) (Third Amendment) Order, 1946.
S.R. and O., 1946, No. 1,693: The Bricks (Range of Prices) (No. 2) (Second Amendment) Order, 1946.

PRICES CURRENT OF MATERIALS*

NOTE.—These prices apply to large quantities of materials at works at London stations, or site, in London area as stated. Prices for smaller quantities ex merchant's warehouse will of course be higher. Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry. The prices of soft woods are for cash on delivery.

IMPORTANT.—It is expected that, in view of the increased railway rates which took effect on July 1, there will be advances in the cost price of certain building materials.

BRICKS, &c.

	£ s. d.
First Hard Stocks	6 10 0
Second Hard Stocks	6 0 0
Mild Stocks	5 5 0

All loaded free into lorry at the works. The question of haulage is still very difficult and prices must be obtained from job to job.

2½ in. Phorpres. A discount of 6d. 1,000 only monthly account.	Certain London L.M.S. Stations per 1,000 s. d.	Sites in PBMA Area, N. of Thames per 1,000 s. d.
Pressed	70 0	85 0
Keyed	72 0	87 0
Single Bullnose	90 0	105 0
Rustics	90 0	105 0
Whites	90 0	105 0

	£ s. d.
Best blue Pressed Staffs. (London Stns.)	14 11 0
Do. Bullnose (London Stns.)	15 1 9
Blue Wire Cuts (London Stns.)	13 6 6

Best Stourbridge Fire Brick (London Stns.) :—

£ s. d.	£ s. d.
2½ in. 13 3 6	3 in. 15 16 6

GLAZED BRICKS (London Stns.). Add 33⅓% to Prices.

Best White Ivory and Salt Glazed		D'ble Str'tch'rs D'ble Headers	38 10 0 35 10 0
Stretcher	30 0 0	One side&two ends	39 10 0
Headers	29 10 0	Two sides & one end	40 10 0
Quoins, Bullnose and 4½in. Flats	36 10 0	Splays and Squints	38 0 0

Second Quality, £2 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

PARTITION SLABS.

Delivered London Area.
12 miles radius Charing Cross.

HOLLOW CLAY PARTITION BLOCKS.
London Brick Company.

Minimum Lorry Loads. Keyed.	s. d.
2" per yd. sup. 120 yds.	2 9
2½" " " 110 "	3 0
3" " " 100 "	3 7
4" " " 84 "	4 1

Half blocks *add* 2s. per yard super to above prices.

CLINKER CONCRETE.

2" per yd. sup.	3 2	3" per yd. sup.	4 2
2½" " "	3 8	4" " "	5 3

CRANHAM TERRA COTTA.

Size 12 x 9 x 2" per yd. super	2 9		
Size 12 x 9 x 2½" " "	3 0		
Size 12 x 9 x 3" " "	3 7		
Size 12 x 9 x 4" " "	4 1		
HEMPSTEAD—KEYED TWO SIDES.			
12 x 9 x 2"	2 9	12 x 9 x 3"	3 7
12 x 9 x 2½"	3 0	12 x 9 x 4"	4 1

Per yard super d/d. Free on site, London.

Plus 2d. for smooth one side, and 4d. for smooth both sides.

STONE.

	s. d.
BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	4 1½
BEER STONE—RANDOM BLOCK—	
Free on rail at Seaton Station per ft. cube	2 3
Delivered free on rail Nine Elms, S.R. "	3 1½
Selected approximate size one way, 1d. per cubic ft. extra, selected approximately three sizes or for special work, 3d. per cubic ft. extra.	
PORTLAND STONE—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R. per ft. cube	4 7½
Do. do. delivered on road waggons as above stations per ft. cub.	4 7½
White basebed, 3d. per ft. cube extra.	
NOTE.—1d. per ft. cube extra for every ft. over 20 ft. *average* and ½d. beyond 30 ft.	
HOPTON-WOOD STONE—	
F.O.R. Quarries, Wirksworth, Derbyshire.	s. d.
Random blocks from 10ft. and over p.ft.cb.	13 2
Sawn two sides	26 11
Sawn three or four sides	31 11
YORK STONE, BLUE—*Robin Hood Quality.*	
Delivered at any Goods Station, London.	
6 in. sawn two sides landings to sizes (under 30 ft. super) per ft. super	8 0
6 in. rubbed two sides, ditto "	9 4
3 in. sawn two sides slabs (random sizes) "	3 10
2 in. to 2½in. sawn one side slabs (random sizes) (paving) "	2 0
1½ in. to 2 in. ditto "	1 9½
HARD YORK—	
Delivered at any Goods Station, London.	
Scrappled random blocks . per ft. cube	12 0
6 in. sawn two sides landings to sizes (under 40 ft. super) per ft. super	8 10
6 in. rubbed two sides, ditto "	10 6
4 in. sawn two sides slabs (random sizes) "	5 8
3 in. ditto ditto "	4 3
2 in. self-faced random flags per yd. super	16 0

CAST STONE.

Delivered in London area in full van loads, per ft. cube : Plain, 10s. ; Moulded, 12s. 6d.
Small section cills and copings, 15s.

SAND.

Thames Ballast	12s. 6d. per yd.	delivered 2 miles radius Paddington.
Pit Ballast	10s. 9d. " "	
Pit Sand	13s. 0d. " "	
Washed Sand	16s. 0d. " "	
¾ in-shingle	13s. 0d. " "	
¾ in. Broken Brick	17s. 3d. " "	
Pan Breeze	10s. 9d. " "	

CEMENT.

Best British Portland Cement.	Standard Specification, delivered London area	£ s. d.
6 ton loads and upwards site	per ton	2 17 0
1 to 6 tons site		3 0 0
In paper bags or non-returnable jute sacks, 7s. net per ton of cement extra.		
"Ferrocrete" Rapid Hardening Cement		
6 ton loads and upwards site		3 3 0
1 to 6 tons site		3 6 0
In paper bags 7s. per ton extra.		
"Aquacrete" Water Repellent cement, 31/6 per ton on ordinary "Blue Circle" prices. In paper bags 7s. per ton extra.		
Rapid Hardening "Colorcrete" in 6-ton lots		4 18 6
In paper bags 7s. per ton extra.		
"Colorcrete" not rapid hardening, according to colour. In 4 ton lots from 166/6 to 390/6 per ton according to colour (including paper bags).		
"Snowcrete" White Portland Cement (in free paper bags)		11 6 6
Under one ton	per cwt.	0 13 2
"417" Cement (Ultra Rapid Hardening) Delivered Site London Area in 6 ton lots and upwards		3 18 6
In paper bags 7s. per ton extra.		
Super Cement (Waterproof), bags extra		4 8 6
Cullamix Tyrolean Finish	£7 9 0 to	9 2 6
(1 ton lots and upwards, including cost of Paper Bags.		
Snowcem Cement Paint (in free airtight containers)	per cwt.	2 16 0

£ s. d.	£ s. d.
Roman Cement 8 10 0	Keene's Cement, White 7 8 6
Parian Cement 7 8 6	" " Pink 7 2 6

SLATES.

First quality slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station.

Per 1,000 actual	£ s. d.		£ s. d.
24 by 12	59 2 6	18 by 10	30 18 0
22 by 12	47 14 0	18 by 9	28 18 6
22 by 11	43 6 0	16 by 10	27 12 0
20 by 12	42 1 3	16 by 8	21 7 6
20 by 10	38 11 3		

NOTE : Breakage in transit, purchasers' responsibility.

KING SLIDING DOOR GEAR

A Garden City Bandstand fitted with King Door Gear and end hung folding doors which enable any side to be opened or closed as required.

Write for Illustrated Booklet.

GEO. W. KING LTD HITCHIN · HERTS ·
HITCHIN 960 (10 lines) | MANCHESTER CENTRAL 3947 | NEWCASTLE 24198 | GLASGOW DOUGLAS 2798

PLASTER.

	£ s. d.		£ s. d.
Coarse, Pink	4 5 6	Sirapite, Coarse	4 11 6
" White	4 14 6	" Finish	4 19 6
Pioneer	5 6 6		

Above prices for 1-ton loads and over London Area

Best Ground Blue		Grey Stone Lime	3 11 0
Lias Lime	3 7 6	Chalk Lime	3 11 0
Granite Chippings	2 8 0	Hair per cwt	3 10 0

NOTE.—Sacks are charged 1s. 9d. each, and credited 1s. 6d. if returned in good condition within three months, carriage paid.
Stourbridge Fireclay in paper bags, £3 4s. 0d., 6-ton lots at railway depot.

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons.....Per 1,000 f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district	£8 4 0
Ditto hand-made ditto	9 1 9
Ornamental ditto	9 11 3
Hip and valley tiles—Hand-made (per dozen)	17 8
—Machine-made	16 8

NOTE : Breakage in transit, purchasers' responsibility.

HARD WOOD.

1 INCH AND UP THICK.

Average price for prime quality.	s. d.		Foot cube. £ s. d.
Dry English Wainscot Billets	16 0	to 0	18 0
Dry Slavonian Billet Wainscot	17 0	to 1	0 0
Dry Cuba Mahogany logs	21 0	to 1	4 0
Square-edged Honduras Mahogany		0	16 6
Log Cut Honduras Mahogany		0	17 6
American Figured Oak		0	13 0
American Plain Oak		0	12 6
Jap Figured Oak		0	13 0
Jap Plain Oak		0	12 6
Teak		0	15 6
American Whitewood		0	12 6
African Whitewood		0	8 0
African Mahogany		0	11 0
Australian Walnut		0	19 0
Australian Silky Oak		0	12 6
Best Scotch glue	per cwt.	5	0 0
Liquid glue	per gallon	1	2 0

SOFT WOOD.

MERCHANTABLE BRITISH COLUMBIAN PINE.

	Minimum £ s. d.	Maximum £ s. d.
Scantlings in imported sizes		
2in. by 3in. by 4in. by 11in.	47 0 0	58 0 0

PLANED BOARDS.
PRIME CLEAR BRITISH COLUMBIAN PINE.

	Per standard. £ s. d.
1 in. by 11 in. / 1 in. by 9 in.	71 0 0 Per square.

	s. d.
1 in. plain edge flooring	56 3
1¼ in. ditto	70 6
1 in. tongued and grooved	56 3
1¼ in. ditto	70 6

MATCHING.

	per square. s. d.
⅝ in.	40 3
¾ in.	45 0
1 in.	59 0

PLUMBERS' BRASS WORK.

Delivered in London.
M.O.H.

S.D. BIBCOCKS CRUTCH HEAD, FOR IRON.
½ in. 33/- ¾ in. 51/- per doz.
TOILET BIB COCKS FOR IRON.
½ in. 60/- ¾ in. 72/- per doz.
S.D. STOP COCKS FOR IRON.
¼ in. ⅜ in. 1 in. 1¼ in. 1½ in. 2 in.
33/- 48/- 86/- 209/- 281/- 456/- per doz.
S.D.S. COCKS WITH TWO UNIONS FOR LEAD.
¼ in. ⅜ in. 1 in. 1¼ in. 1½ in. 2 in.
45/- 77/6 123/- 240/- 372/- 624/- per doz.
DOUBLE NUT BOILER SCREWS.
¼ in. ⅜ in. 1 in. 1¼ in. 1½ in. 2 in.
5/6 6/8 11/- 24/- 36/- 56/- per doz.
HEAVY CROYDON BALL VALVES.
½ in. ¾ in. 1 in. 1¼ in. 1½ in.
72/- 115/- 144/- 288/- 384/- per doz.
CAPS AND SCREWS.
1¼ in. 1½ in. 2 in. 3 in. 3½ in. 4 in.
14/- 18/6 25/9 45/3 64/9 71/6 per doz.
BRASS SLEEVES.
1½ in. 2 in. 3 in. 3½ in. 4 in.
10/9 13/6 25/- 37/- 46/- per doz.
LEAD TRAPS WITH BRASS CLEANING SCREWS.
1½×6 lb. 1½×6 lb. 2×7 lb. 3×7 lb.
Lead P. 26/- 34/- 55/- 92/- per doz.
Lead S. 34/- 41/- 67/- 115/- per doz.
SOLDER.—Plumbers', 1/10½, Tinmen's, 2/4. Blow pipe 2/6 per lb.
Copper Tubes ....1/4½ per lb. Basis.
Brass Tubes ....1/4½ per lb. Basis.
Basis prices are subject to extras.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information. Prices are subject to 2½ per cent. cash discount.

PRICES CURRENT OF MATERIALS—(contd.)

See Note at top of preceding page.

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

	£ s. d.
R. S. Joists, cut and fitted	£27 10 0
Plain Compound Girders	30 10 0
" " Stanchions	35 10 0
In Roof Work	45 10 0

NOTE.—These prices are for standard pieces and not special pieces of an awkward nature.

MILD STEEL ROUNDS.—To London Stations, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	24 5 0	½ in.	22 15 0
⅜ in.	23 15 0	⅝ in. to 2½ in.	22 5 0
½ in.	23 5 0		

WROUGHT TUBES AND FITTINGS.

Deliveries from works.

Deliveries from London stock further 2½% gross.

Tubes. Tubulars, and 10/17 Flanges.

	½" /6" %	½" /6" %	19/24" %	⅝" /2" %	2½" /6" %
Light weight	51¼	—	47½	51	57½
Heavy weight	44	44	39½	41	49¾
Galv. lightweight	30	—	30	30	30
Galv. heavyweight	20	20	20	20	20

Tubes and tubulars sizes ⅛" /⅜" inclusive, charged extra of 5% less gross.

Fittings. Figs. 25/34 5% less gross discount.

Terms.—Nett cash end of month following date of invoice. Carriage paid on lots of £10 nett value and over.

C.I. HALF-ROUND GUTTERS.—London Works, per yd. in 6 ft. lengths.

	Gutters.	Nozzles.	Prices ex Stop ends.
3 in.	2/2	1/11	6½d.
3½ in.	2/5½	2/2	6½d.
4 in.	2/5½	2/3½	10½d.
4½ in.	2/6½	2/7½	11½d.
5 in.	3/1	3/–	1/3

O.G. GUTTERS.

3 in.	2/10	2/6½	7½d.
3½ in.	3/2	2/6½	10½d.
4 in.	3/2	2/7½	11½d.
4½ in.	3/4	3/1	1/3
5 in.	4/–	3/7	1/4

RAIN WATER PIPES.

Per yd. in 6 fts.	Pipe.	Bends. Angles.	Branches.
2 in.	4/6	2/4	3/6
2½ in.	4/8	2/8	4/–
3 in.	5/3	3/5	4/11
3½ in.	6/–	3/11	5/9
4 in.	6/11	4/9	6/11

NET PRICES.

Tonnage allowance—4-ton lots, 5 per cent. 2-ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES.—London Prices, ex stock.

Per yd. in 6 fts.	Pipe.	Bends.	Branches.
2 in.	5/5	4/1	5/–
2½ in.	5/8	4/7	6/2
3 in.	6/3	5/–	7/5
3½ in.	7/1	6/2	8/7
4 in.	8/1	6/11	10/–

L.C.C. COATED DRAIN PIPE.

	cwt. qr. lbs. in 9 fts.	per yard.	Bends.	Branches.
4 in.	1 1 17	10/8	9/8	16/11
6 in.	2 0 1	15/10	20/–	34/8

Per ton basis in London.

	£ s. d.
IRON.—Staffordshire Crown, Merchant quality	24 10 0
IRON.—Staffordshire Marked Bars	25 5 0
Mild Steel Bars	20 10 0
Mild Steel Hoops	22 7 6

Ex Merchant's Stock. per ton (two-ton lots).

	£. s. d.
Soft Steel Sheets, C.R. and C.A.—	
20 gauge	26 5 0
24 gauge	27 5 0
26 gauge	28 5 0
Galvanised Corrugated Sheets, 6 ft. to 9 ft.—	
20 gauge	29 12 6
24 gauge	31 7 6
26 gauge	33 12 6
Galvanised Flat Sheets, C.R. and C.A.—	
20 gauge	30 12 6
24 gauge	32 7 6
26 gauge	34 12 6

Per ton.

	£ s. d.
Cut Nails, 3 in. and up	31 10 0

ALL NET.

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 3s. 3d. to 3s. 6d. per foot super.

PAINTS, &c.

	£ s. d.
Raw Linseed Oil (5 galls.) .. per gallon	0 15 6
Boiled Linseed Oil (5 galls.) .... "	0 15 10
Genuine White Lead (free kegs) cwt.	5 7 9
Genuine White Lead Paint (tins free) gall.	2 1 4
Genuine Red Lead cwt.	4 8 9
Linseed Oil Putty (free packages) cwt.	2 0 0
Size, XD quality .....fkn.	0 7 6

Turpentine substitute can be obtained and prices vary according to quality from 3/8 gallon upwards.

BUILDING TRADE WAGES IN SCOTLAND

Following are grade rates authorised by the Scottish N.J.C. from January 1, 1946. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification A Craftsmen ..... 2/6 Labourers 2/–

Aberdeen .....A	Dumfriesshire ....A	Inverness.....A	Perthshire .....A
Ayrshire .....A	Dundee .....A	Inverurie.....A	Peterhead .....A
Banff .....A	Dunoon .....A	Kincardinshire ....A	Renfrewshire .....A
Berwickshire .....A	East Fife.....A	Kinross-shire .....A	Rothesay.....A
Bridge of Allan ....A	East Lothian .....A	Lanarkshire .....A	Roxburghshire ....A
Broughty Ferry ..A	Edinburgh .....A	Midlothian .....A	St. Andrews .....A
Clackmannanshire..A	Fifeshire .....A	Monifieth .....A	Selkirkshire .....A
Doune.....A	Forfarshire .....A	Moray and Nairn..A	Stewartry .....A
Dunblane .....A	Glasgow .....A	Newport .....A	Stirlingshire .....A
Dumbartonshire ..A	Greenock .....A	Peeblesshire .....A	Stornoway .....A
Dumfries.....A	Hamilton .....A	Perth .....A	Tayport .....A
			West Lothian.....A

The Scottish N.J.C. award on which this is based does not provide for any variation to current rates of Apprentices' wages, which will be considered by the General Council of the Apprenticeship Scheme. The information given in this table is copyright.

Painters' rates : 2/6 Grade A ; 2/5 Grade B. (Grade B towns are Banff and Moray and Nairn).

VARNISHES, &c.

		Per gallon. £ s. d.
Oak Varnish	Outside	0 16 0
Fine do.	"	0 18 0
Fine Copal	"	1 0 0
Pale Copal	"	1 2 0
Pale Copal Carriage	"	1 6 0
Best do. do.	"	1 14 0
Floor Varnish	Inside	1 0 0
Fine Pale Paper	"	1 0 0
Fine Copal Cabinet	"	1 4 0
Fine Copal Flatting	"	1 2 0
Hard Drying Oak	"	1 0 0
Fine Hard Drying Oak	"	1 1 6
Fine Copal Varnish	"	1 2 6
Pale do.	"	1 14 0
Best do.	"	1 4 6
Best Japan Gold Size	"	1 14 6
Best Black Japan		0 12 0
Oak and Mahogany Stain (water)		0 14 0
Brunswick Black		0 9 6
Berlin Black		0 16 0
Knotting (patent)		0 17 0
French and Brush Polish		0 14 0
Liquid Dryers in Terebene		0 11 0

LEAD, &c.

(Delivered in London 5 cwts.)	Per ton. £ s. d.
LEAD.—Sheet, English, 3½ lb. and up	69 10 0
Pipe in coils	70 10 0
Soil pipe	73 10 0
Compo pipe	76 0 0

NOTE.—Country delivery, 10/– per ton extra, lots under 3 cwt. 4/– per cwt. extra and over 3 cwt. and under 5 cwt., 3/– per cwt. extra. Extra if cut to size. Old lead, ex London area, per ton £33 0 0. Buyers pay carriage.

The Hall Mark AYGEE of Craftsmanship

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LONDON, S.E.1. 'phone:
WATerloo 6314 (6 lines)

THE SCOTTISH BUILDER

NEW BUILDINGS

Bargeddie.—Offices, assembly dept., etc., proposed at Langmuir-rd. Plans by J. Thomson & Son, 7, Victoria-rd., Airdrie.

Coatbridge.—Stewarts and Lloyds, Ltd., tube manufacturers, propose housing scheme for staff and key-workers.

Dumfries.—T.C. to erect 54 steel-framed four-apartment houses at Moat of Troqueer at £70,000.

Fort William.—T.C. approved plans for 122 houses at Claggan, Glen Nevis.

Glasgow.—Dean of Guild Court passed plans for two temporary schools at Shettleston and Yoker districts.

Glasgow.—School buildings proposed at Knightswood-rd. John MacNab, architect, 129, Bull-st., Glasgow. Offices, workshops and stores proposed at Cogan-st. for Donaldson & Filer, Ltd., 41, Cogan-st.

British Purchasing Agency in Germany.

A British Purchasing Agency has been set up at Minden, under the Sundry Materials Branch of the Board of Trade, with the object of centralising all exports from Germany to the United Kingdom, except timber and scrap metal. This organisation will maintain the closest liaison with the Control Commission. All purchases are on Government account, and distribution will be made through the Sundry Materials Branch of the Board of Trade. All inquiries which should be in writing and should relate to specific goods, should be addressed to Sundry Materials Branch, 10, Old Jewry, London, E.C.2.

GLASS.

SHEET GLASS, ORDINARY GLAZING QUALITY CUT SIZES.

	Per ft. super. d.
18 oz.	3¾
24 oz. Clear	5½
26 oz.	6½
32 oz.	8¼

ENGLISH ROLLED PLATE AND FIGURED CATHEDRAL, ETC., IN CUT SIZES.

Over 500 ft. super of all kinds.	Per ft.
Rolled plate, ¼in.	6½
Rough cast double rolled, ⅜ in.	7½
Rough cast double rolled, ½ in.	7½
Figure rolled, and Cathedral, white	7½
Figured rolled and Cathedral, tinted	10½
Rolled Sheet	6
Reeded, Broad Reeded, Cross Reeded and Chevron Reeded, ¼in. thick	10½d.

Rolled plate is the same price as rough cast double rolled.

	Per ft. s. d.
Wire Cast, ¼ in. thick	0 9½
Georgian Wired Cast	0 10½
"Calorex" Sheet, 21 oz.	2 6
" " 32 oz.	4 0
" Cast, ¼ in. thick	0 9½
" " ⅜ in. thick	1 0
" " ½ in. thick	1 2
Non Actinic Glass, ¼ in. thick	0 10½
" " " ⅜ in. thick	1 1½
" " " ½ in. thick	1 3½

HOLLOW GLASS BLOCKS.

	s. d.
P.B. 2—5½ in. × 5½ in. × 3½ in.	2 6 each net
P.B. 3—7½ in. × 7½ in. × 3½ in.	3 6 "
P.B. 32—7½ in. × 7½ in. × 3½ in.	3 6 "
Radiused Corner Brick to match up with—	
P.B. 2	4 6 "
P.B. 3	6 0 "
P.B. 32	6 0 "

NEWS ITEMS

G.W.R. to Rebuild Signal Works.

The G.W.R. Signal and Telegraph Works at Reading is to be rebuilt and re-equipped at a cost of £300,000. The new works will be on the same site as the existing works first established at Reading in 1855. They will be all under one roof, with top lighting in all working departments, modern layout to facilitate efficient and economic production and repairs and up-to-date canteen facilities

A.B.C. of Housing.

A useful and interesting booklet recently issued is the "A.B.C. of Housing," prepared by the Women's Voluntary Services, 41, Tothill-street, London, S.W.1. Comprehensive and commendably detailed in its scope, the booklet gives information on over 150 different subjects connected with housing, including Parliamentary Acts and Bills, prefabrication, labour, requisitioning, rents, district heating, compensation, etc.

Railways and the Future.

A short statement showing what railways have done in recent years and what they are now doing for the continuous improvement of transport is contained in the pages of a booklet recently issued by the G.W.R., L.M.S., L.N.E.R., and S.R. from 22, Palace Chambers, S.W.1. An appendix details the extensive programme of developments and improvements which the railways intend to carry out in the future. Among the works contemplated are the reconstruction and improvement of about 60 of the main line stations, in various parts of the country, the modernisation of refreshment and buffet rooms, electrification schemes on several lines, and the construction of thousands of new passenger carriages incorporating many new design features.

An Information Book.

One of the most comprehensive and carefully compiled trade publications that has recently come our way is the "Bison Information Book," published by Concrete, Limited, Green-lane, Hounslow, Middlesex. Intended specifically to be of assistance to architects, surveyors, engineers and builders, it provides a wealth of constructional information on Bison Precast Hollow Floors, dealing with such matters as bearings, cantilevers, drainage channels, finishes, splay bays, etc., in some detail. Thirty well-produced, detailed drawing sheets admirably illustrate the text of this section. Such subjects as deflection, expansion, sound insulation, etc., are dealt with in another part of the book, which concludes with a series of photographs of notable buildings in the construction of which these floors have been used.

Control of Civil Building.

The Minister of Health has intimated to all local and housing authorities in the London Civil Defence Region that the Government is anxious that all practicable steps should be taken to eliminate "black market" building work. The Minister of Works is expanding his organisation set up to investigate alleged contraventions of Defence Regulation 56A, and the Minister is confident that local authorities will be anxious to co-operate in the action now contemplated.

The Minister, in his letter, adds that local authorities will appreciate that it is a matter of prime importance that information about possible breaches of Defence Regulation 56A should reach the investigating officers of the Ministry of Works with the minimum of delay. Such information should therefore be furnished direct to the Contraventions Officer, Ministry of Works (Room 16), 51, Gracechurch-street, E.C.3. Telephone Number: Mansion House 9855, Ext. 204 or 142.

MATERIAL PRICES

Increase in Price of Turpentine.

The Board of Trade announce an increase in the selling prices of turpentine which took effect from October 18, 1946. The new prices are as under:—

	Per ton
American Gum Spirits	£125
Portuguese Gum Spirits	£115
American Steam Distilled Wood Spirits	£110

net, naked, including duty, ex store United Kingdom, delivery in loan drums.

Resale by retail distributors:—

	American Gum Spirits	Portuguese Gum Spirits	American Steam Distilled Wood Spirits
	s. d.	s. d.	s. d.
5-gall. drums.	11 9	11 0	10 6
10-gall. drums	11 6	10 9	10 3

nett, per imperial gallon, including duty, ex suppliers' premises in free drums

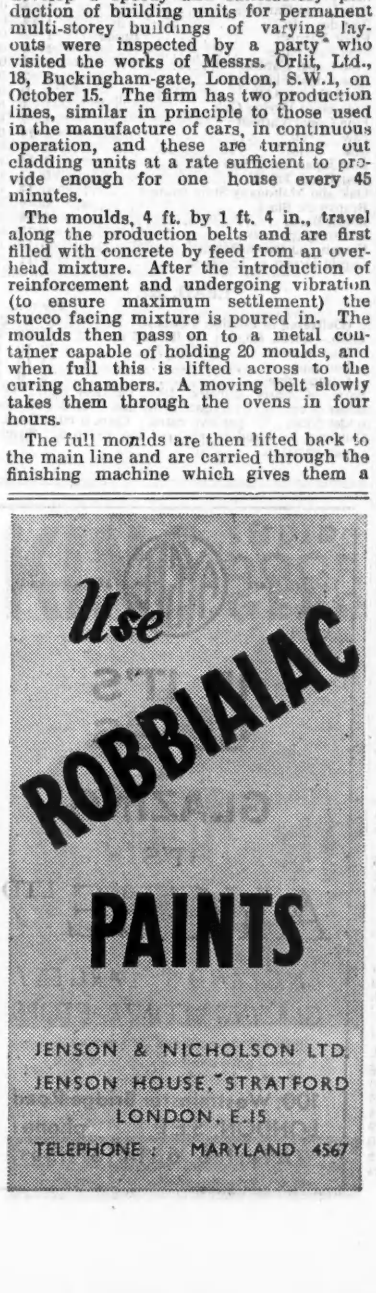
TRADE NEWS

Building Units on the Production Belt.

The results of many experiments to develop a speedy and satisfactory production of building units for permanent multi-storey buildings of varying layouts were inspected by a party who visited the works of Messrs. Orlit, Ltd., 18, Buckingham-gate, London, S.W.1, on October 15. The firm has two production lines, similar in principle to those used in the manufacture of cars, in continuous operation, and these are turning out cladding units at a rate sufficient to provide enough for one house every 45 minutes.

The moulds, 4 ft. by 1 ft. 4 in., travel along the production belts and are first filled with concrete by feed from an overhead mixture. After the introduction of reinforcement and undergoing vibration (to ensure maximum settlement) the stucco facing mixture is poured in. The moulds then pass on to a metal container capable of holding 20 moulds, and when full this is lifted across to the curing chambers. A moving belt slowly takes them through the ovens in four hours.

The full moulds are then lifted back to the main line and are carried through the finishing machine which gives them a special finish. The finished slab is then lifted from the mould and stacked for final curing, the mould moving along the belt to be sprayed with mould oil before repeating its journey.



A NEW INVENTION

Electrical Water Heating Device.

An electrical water heater which can be fitted to the "outlet" of the water system, between the boiler and the kitchen sink, has recently been brought to our notice. The object of the invention is to ensure hot water supply quickly without the need to light the kitchen boiler or heating up the contents of the storage tank. It is claimed that hot water may be obtained from the tap within two minutes of the time at which the heater is set into operation by means of an electrical switch connected with the main supply current, and that the electricity consumption is negligible. It comprises a cylindrical copper vessel, approximately 6 in. in diameter and 12 in. high, fitted with an internal spiral baffle. An inlet pipe in the lower end and an outlet pipe in the upper end are provided with standard pipe unions, so that the unit may be connected to the "outlet" line from the boiler by cutting the "outlet" pipe and connecting the unit therein. In the vessel is an electrical immersion heater of 2 to 4 kilowatts, power making no difference to the size of the vessel, and a thermostat for controlling the heater for the desired temperature. This automatically cuts out when the adjusted temperature is obtained. The electrical wiring is hidden and the switch normal sized.

Mr. G. McCallum, 83, High View-road, South Woodford, E.18, is the sole agent for this new invention.

HINTS ON SAVING PAINT

OFFICIAL RECOMMENDATION

SEVERE restrictions on the use of paint are necessary because of acute shortage of linseed oil and other raw materials. How these economies can be made is shown in a memorandum prepared by the Ministry of Works in collaboration with other Government Departments. It deals mainly with site work on permanent buildings of traditional types, and is based on the following principles:—(1) Paints containing linseed or other fatty oils should not be used for purely decorative purposes; (2) Permanent buildings should have the preference over temporary in the use of paint; (3) Protection against corrosion and decay of essential structural parts of buildings should have preference in the use of paint over the less important parts; (4) The functions of buildings as well as destructive and contaminating conditions must be taken into account—for example, hospitals, dairies and kitchens, and exposure to severe atmospheric conditions.

The memorandum points out that in using the fewer coats of paint specified in the schedule, better results are obtained by using darker paints instead of white and light tints. Moreover, opaque white pigments are in short supply. Cement paints, silicate paints, tar, tar paints and wood preservatives are all in good supply, and may be used for all new or maintenance work without restriction. The memorandum has been circulated by the Ministry of Works to Government Departments and to the paint and building industries and by the Ministry of Health to local authorities as well as water, sewerage, hospital, cemetery, burial and mental hospital boards, voluntary hospitals and water companies. The Minister of Health (Mr. Aneurin Bevan) has asked for their co-operation in achieving economy in paint.

FUTURE CONSTRUCTION

CONTRACTS OPEN

For some contracts still open but not included in this list, see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

NOVEMBER 4.

*†**Chester R.D.C.**—Four houses, etc., at Stoak and 8 houses at Elton. D. Minshull and Co., 6, Abbey-sq., Chester, architects for Stoak, and H. Beswick, 19, Newgate-st., Chester, architect for Elton. Dep. £2 2s. Tenders by November 18.

*†**Folkestone T.C.** — 4 houses, Horn-st. and Cheriton High-st. E. L. Allman, B.E. Dep. £3 3s. Tenders by November 18.

NOVEMBER 6.

†***Biggleswade R.D.C.**—36 houses at 6 sites. C. Dep. £2 2s.

NOVEMBER 8.

†***Merton and Morden U.D.C.**—24 houses at West Barnes-la. (Contract 5), and/or 4 houses and 2 flats at east side of Linkway (Contract 5a). C. Dep. £3 3s. Tenders by December 3.

NOVEMBER 9.

†**Nantwich U.D.C.**—52 houses at Beam-st. E. H. Bailey, F.S.I., E. and S. Dep. £5.

Penistone R.D.C.—(1) 10 houses and service road at Ingbirchworth; (2) service road at Crowedge. N. Heppenstall, 39, Market-st., Milnsbridge, Huddersfield. Dep. £2 2s. Tenders by November 23.

Sowerby Bridge U.D.C.—50 houses. Wilkinson and Coutts, surveyors, 10, Harrison-rd., Halifax. Dep. £2 2s.

NOVEMBER 11.

Lindsey C.C.—4 pairs of police houses with roads, sewers and footpaths at Civic Centre site, Scunthorpe. Place, Leslie and Holden, quantity surveyors, 23, South King-st., Blackpool.

Maltby U.D.C.—Construction of public conveniences at Muglet-la. E. and S. Dep. £2 2s.

†***Tarvin R.D.C.**—40 "Airey" houses at various sites. C.

Warmley R.D.C.—22 houses at Goldney-ave., London-rd. Council Offices. Dep. £2 2s.

Weymouth and Melcombe Regis T.C. — 24 houses and 12 flats at Shortlands-rd., Upwey. B.E. and S. Dep. £2 2s.

Wigan R.D.C.—26 houses at Parbold and 46 houses at Wrightington, with roads and sewers. J. Holding, S., Bank-chbrs., Wallgate, Wigan. Dep. £3 3s.

NOVEMBER 12.

Stratford-on-Avon R.D.C.—14 houses at Alderminster. J. E. Bagnall and Son, quantity surveyors, York House, Gt. Charles-st., Birmingham 3. Dep. £1 1s.

Withnell U.D.C.—6 houses at Oak Tree site S. Dep. £2 2s.

NOVEMBER 13.

***Croydon C.B.** — Prefabricated classroom block at New Addington School, Overbury-cres., New Addington. Education Officer, Katherine-st. Dep. £1.

NOVEMBER 14.

***Chepstow R.D.C.**—20 houses at Caerwent, 26 at Rogiet, and 8 at St. Arvans, with roads and sewers on each site. Thomas and Morgan and Partners, 23, Gelliwasted-rd., Pontypridd. Dep. £3 3s.

Cheshire C.C.—Prefabricated hutting to form kitchen and dining-room at Bredbury Junior Mixed and Infants' School. E. M. Parkes, County A. Dep. £2 2s.

Cheshire C.C.—Prefabricated hutting to form kitchen and dining-room at Ash Grove School, Macclesfield. E. M. Parkes, County A. Dep. £2 2s.

Newtown and Llanidloes R.D.C.—2 pairs of Airey houses at Bettws with road, drainage, etc., and construction of sewage disposal plant, etc., and 1 pair of houses at Caerws. W. B. Bond, quantity surveyor, 3, Newhall-st., Birmingham 3. Dep. £2 2s.

Plympton St. Mary R.D.C.—54 dwellings at Woodford. C. Dep. £3 3s.

Spilsby R.D.C.—1 pair of Swedish houses, 4 pairs of brick houses and 1 pair of brick bungalows with site and sewage disposal works for the houses and for 14 prefabricated bungalows. Wm. Saunders and Partners, architects, 24, Castle-gate, Newark-on-Trent. Dep. £2 2s.

Sutton Coldfield T.C.—12 bungalows at Tower-rd. estate. B.S. Dep. £2 2s.

***Watford R.D.C.**—12 flats, near Willow-way. Radlett. S. A. Nicholson, C., 25, King-st. Dep. £1 1s.

NOVEMBER 15.

†***East Sussex C.C.**—Erection of Junior School at Portslade. E. A. Verger (F.), County A., County Hall, Lewes. Dep. £3 3s.

NOVEMBER 16.

Keith (Banffshire) T.C.—Work in various trades for 14 houses at South Cuthil site. Burgh S. Dep. £1.

***Maidenhead T.C.**—Repair and rebuilding of approximately 200 lin. ft. of Portland stone parapets of Maidenhead Bridge, including provision of approx. 100 cu. ft. new ashlar, coping and balusters. B.E. and S. Dep. £2 2s.

Monmouth T.C.—50 houses at Wyesham estate B.S. Dep. £2 2s.

NOVEMBER 18.

***Bournemouth C.B.**—Transport Control Offices and extension of existing public convenience at Avenue-rd. Jackson and Greenen (F. and A.), Hinton-bldgs., Hinton-rd., Bournemouth. Dep. £3 3s.

Brighton E.C.—(1) Dining-room and kitchen at Moulsecoomb School; (2) dining-room and scullery at St. Luke's Terrace School. Tenders also invited for adaptations at Royal Sussex Hotel for use as Training College Hostel. B.E. and S. Dep. £3 3s.

Cuckfield U.D.C.—76 houses and flats at Barn Cottage estate, America-la., Haywards Heath. S Dep. £2 2s.

***Durham C.C.**—6 police houses at Houghton-le-Springs. Wm. J. Merrett, County E., S. and Architect, 20, Old Elvet, Durham.

Shore Housing Association.—15 pairs of houses at Shore, Littleborough. E. A. Newton, Leach and Booker, architects, 28, Kennedy-st., Manchester 2. Dep. £2 2s.

Wallasey C.B.—Reconstruction of No. 2 Block, Mill-la. Hospital. B.E. Dep. £2 2s.

Warwickshire and Coventry Joint Committee for Tuberculosis.—Adaptations at "Grove House," Keresley, to form Mass Miniature Radiography Headquarters. C. H. Elkins (L.), Architect to Joint Committee, Shire Hall, Warwick. Dep. £2 2s.

Wembley T.C.—64 houses with drainage and site works at Sudbury Farm estate. Boro' Treas. Dep. £1 1s.

West Riding Standing Joint Committee.—(1) 4 pairs of police houses at Thornes-rd. estate, Wakefield; (2) 4 pairs police houses at Pannal. Hubert Bennett (F.), County A., County Hall, Wakefield

NOVEMBER 20.

Pontypridd and Rhondda Joint Water Board.—Reconstrucion of Ionwood reservoir. W. E. Holmes Watkins, B.Sc., A.M.I.C.E., 23, Gelliwastad-rd., Pontypridd. Dep. £3 3s.

NOVEMBER 25.

***Blackwell R.D.C.**—18 houses at Wilson-ave. Architect and Housing Superintendent, "Dale Close," 100, Chesterfield-rd., South, Mansfield, Notts. Dep. £2 2s.

NOVEMBER 26.

***Chippenham T.C.**—40 dwellings at Derriads. B.E. Dep. £2 2s.

Tyldesley U.D.C.—40 houses at Astley-st., site No. 2. D. Urwin, E. and S. Dep. £3 3s.

NOVEMBER 27.

***Hackney B.C.**—100 flats at Banister House Extension (Priestley-st.) Housing Manager, 219, Mare-st., E.8. Dep. £2 2s.

Northampton R.D.C.—20 Airey houses at 4 sites. R. J. Miller, S., 1, Cheyne Walk, Northampton. Dep. £2 2s.

NOVEMBER 30.

***Newmarket R.D.C.**—48 houses and bungalows at various sites. L. J. Cockerham (L.), Council Offices. Dep. £3 3s.

Wolverton U.D.C. — Roads and sewers at Furze-way estates. E. and S. Dep. £1 1s.

DECEMBER 9.

Ellesmere Port U.D.C.—102 houses at Stanney estate. E. and S., Queen-st., Ellesmere Port. Dep. £3 3s.

NO DATE.

***Durham Colleges.** — Reinforced concrete foundations, framework, excavations, etc., for erection of building for St. Mary's College on south of Quarry Heads-la., and of men's rooms in grounds of Hatfield College to designs. G. E. Vincent Harris, R.A., Treasurer of Durham Colleges, 38, North Bailey, Durham. Dep £10 10s.

MISCELLANEOUS

NOVEMBER 11.

Hammersmith B.C.—Removal and collection of Anderson and Morrison shelters. B.E. and S.

Newport C.B.—Demolition and clearance of shelters and C.D. structures. B.E. and S. Dep. £1 1s.

ROADS, SEWERAGE AND MATERIALS, ETC.

NOVEMBER 11.

Chesterfield R.D.C.—Roads and sewers at North Wingfield, Hillyfields. E. and S. Dep. £2 2s.

Keighley T.C.—Making-up View-rd. B.E. Dep. £1 1s.

Lancs C.C.—Construction and completion of new road on Southport-Ormskirk-St. Helens Trunk-rd., A570. County S. and Bridgmaster. Dep. £5 5s.

Leamington Spa T.C.—Roads and sewers at Kingsway estate. Acting B.E.

Magor and St. Mellons R.D.C.—Construction of sewer between High Cross and Western Valley trunk sewer. Thomas and Morgan and Partners, 23, Gelliwastad-rd., Pontypridd. Dep. £5 5s.

Swaffham R.D.C.—Sinking of borehole at West Bradenham. W. Herbert Bateman and Partners, Halifax House, Bank Plain, Norwich. Dep. £2 2s.

Wembley T.C.—Reconstruction of concrete road and resurfacing of Church-la. and Tudor-gdns., Kingsbury. Boro' Treas. Dep. £2 2s.

Weymouth and Melcombe Regis T.C.—Road and drainage works at Lynch-la. industrial site. B.E. and S. Dep. £2 2s.

NOVEMBER 12.

Bridgwater T.C.—Relaying parts of Bristol and Taunton trunk roads. B.E.

***Caterham and Warlingham U.D.C.**—Roads and sewers at Sunnybank, Farleigh-rd., Warlingham. E. and S.

***Mitcham T.C.**—Construction of 6 in. dia. land drain at Abbott's-rd. B.E. and S.

Spalding R.D.C.—450 yds of 15 in. dia. concrete pipe sewers, 450 yds. of 12 in., 2,700 yds. of 9 in. and 2,500 yds. of 6 in. dia. salt-glazed ware sewers, precast concrete manholes, about 1,000 yds. of 5 in. dia. spun-iron socket and spigot pipes, two brick pumping stations and sewage disposal works, etc. Silcock and Simpson, consulting E., 10, Park-row, Leeds 1. Dep. £5.

NOVEMBER 13.

Brightlingsea U.D.C.—Roads and sewers at Chapel-rd. estate. S. Dep. £2.

NOVEMBER 14.

Ilford T.C.—72-in. concrete surface water sewer at Forest-rd. estate.

Loddon R.D.C.—Construction of 5,000 yds. of 6 in. dia. stoneware and cast-iron sewers, two pump wells and pumphouses, sewage disposal works, and laying and jointing of approx. 1,450 yds. of 4 in. dia. cast-iron rising main, etc. W. Herbert Bateman and Partners, Halifax House, Bank Plain, Norwich. Dep. £5 5s.

***Wokingham R.D.C.**—Roads and sewers. Eric G. V. Hives (L.), 3, Cork-st., Reading, and 106, Regent-st., W.1. Dep. £2 2s.

***Wokingham R.D.C.**—Roads and sewers at Loddon Bridge-rd site, Woodley. Chas. Smith and Son (F. and A.), 164, Friar-st., Reading. Dep. £2 2s.

NOVEMBER 15.

Ashton-under-Lyne T.C.—Roads and sewers at Rose Hill-rd., etc. B.E. and S.

†***Hornsey T.C.**—Road and sewer works at North Hill flats, Highgate. J. H. Melville Richards, B.E. and S.

Hull T.C.—Roads and sewers at Holderness-rd.-Saltshouse-rd. City E. Dep. £2.

Newport C.B.—Laying approx. 8 miles of 28-in. steel trunk main, etc. W. W. Marsden, M.Inst.C.E., Crown Arcade, Newport, Mon. Dep. £20.

Stevenage U.D.C.—Roads, sewers, etc., at Lish-la. site. C. Dep. £2.

NOVEMBER 18.

†**Wycombe R.D.C.**—Construction of approx. 850 yds. of 4-in. cast-iron sewage pumping main, pumping station, etc. D. Balfour and Sons.

consulting E., 131, Victoria-st., Westminster, S.W.1. Dep. £3.

NOVEMBER 18.

Atherstone R.D.C.—Construction of sewer at Dordon. E. and S. Dep. £3 3s.

Barnes T.C.—Resurfacing Avondale-rd. B.E. Dep. £2.

East Barnet U.D.C.—(a) Extension of Eastern low level sewer; (b) storm-water relief sewer, Oakdale to Pymmes Brook. E. and S. Dep. £2 each contract.

Halesworth (Suffolk) U.D.C.—Construction of approx. 4 miles of stoneware and cast-iron sewers, etc. W. C. Easdale, consulting E., 1, Victoria-st., London, S.W.1. Dep. £5 5s.

Neston U.D.C.—Roads, sewers, water mains, etc., at Mellock-la. Williams and Clarke, 5 and 6, Godstall-chbrs., Chester. Dep. £3 3s.

NOVEMBER 20.

Doncaster C.B.—Construction of relief sewer Lowther-rd., Wheatley-la. B.E. Dep. £2 2s.

NOVEMBER 21.

Aylesbury R.D.C.—Sewerage works at Stoke Mandeville. Elliott and Brown, civil engineers, Stanley House, Pelham-rd., Nottingham. Dep. £3 3s.

NOVEMBER 22.

Okehampton R.D.C.—Construction of 4 miles of 4-in. water mains, reinforced concrete reservoir. Lemon and Blizard, 24, Lockyer-st., Plymouth. Dep. £3 3s.

NOVEMBER 25.

Andover T.C.—Preparation of site No. 9, Toll-gate-rd. and Charlton-rd., drainage. B.S. Dep £2 2s.

Potters Bar U.D.C.—Roads and sewers, etc., at Dugdale Hill estate. E. and S. Dep. £3 3s.

Windsor T.C.—Reconstruction of High-st. B.E. and S. Dep. £2 2s.

NOVEMBER 27.

Hertford R.D.C.—Site works at Little Berkhampstead. C., 20, Castle-st., Hertford. Dep. £3.

NOVEMBER 30.

Bolsover U.D.C.—Construction of sewers, etc., at main sewage disposal works. H. Taylor, M.C., M.Inst.C.E., Regal Chbrs., Cavendish-st., Chesterfield. Dep. £3 3s.

Eastleigh T.C.—Road, sewer and drainage works, Chestnut-ave. B.E. Dep. £2 2s.

Grimsby C.B.—Relief sewer, Laceby-rd. B.E and S. Dep. £5.

DECEMBER 2.

Holsworthy R.D.C.—Laying of 3,580 yds. of 4-in. and 6,110 yds. of 3-in. asbestos-cement mains, together with construction of two reinforced concrete reservoirs, two pumphouses, etc. Rofe and Rafferty, chartered civil engineers, 3, Victoria-st., Westminster, S.W.1. Dep. £2 2s.

South Molton R.D.C.—Laying of 285 yds. of 4 in. dia. and 1,440 yds. of 3 in. dia. asbestos cement mains and two reinforced concrete works at North Molton and Brayford. Rofe and Raffety, 3, Victoria-st., S.W.1. Dep. £2 2s.

Thornton Cleveleys U.D.C.—Sewage pumping station at junction of Westmorland-ave. and Cleveleys-ave. E. and S. Dep. £2 2s.

PUBLIC APPOINTMENTS

Full details of Public Appointments open will be found in the advertisement pages of this and previous issues.

GENERAL BUILDING WORK

(LONDON)

Battersea.—CINEMA.—Gaumont-British Picture Corporation report that plans have been completed for a cinema to be erected on the site of the former Lavender-hill Pavilion.

Hammersmith.—EXTENSION TO PREMISES.—The B.C. have raised no objection to an application by Messrs. Leslie Marsh and Co. to extend the premises of Hofland Creamery, Hofland-rd., to cover the site of Nos. 83-105, Milsom-rd., W.14.

Hammersmith. — WORKS EXTENSION. — The L.C.C. has approved an application made by Messrs. W. S. Grice to erect an extension to a temporary two-storey building at the premises of Messrs. Silexine, Ltd., Richford-st., W.6.

Lambeth.—HOUSING.—The B.C. propose to purchase a site of 8.63 acres at the corner of Crown-la. and Leigham Court-rd. for housing purposes.

Lambeth.—HOUSING.—B.C. are to apply to the L.C.C. for sanction for a loan of £369,767 for the erection of 282 dwellings on the Portobello estate—No. 10 site.

St. Pancras.—HOUSING.—B.C. propose to purchase sites in Clarence-way (Nos. 3 and 4), St. Pancras-way (No. 4) and Werrington-st. (No. 1) for housing purposes.

Walthamstow.—PLANS APPROVED.—The Survey and Plans Committee has approved the following plans submitted: Mr. Leonard E. Ashton—additional floor to factory, Regent Cinema, St. James-st., and rebuilding No. 190, St. John's-rd. Messrs. Halex, Ltd.—factory extension, Hale End Works, Larks Hall-rd. Elliott, Cox and Partners—extension to factory, Fingal Works, Staffa-rd. Mr. A. J. Whatley—Coach Station, 277-279, Wood-st.

Also approved are the following applications for interim development—Mr. L. Ashton—rebuilding of store, 144/144a, Palmerston-rd. Mr. R. J. L. Slater—rebuilding Nos. 159, 161, 163 and 165, Shernhall-st., Nos. 49, 50 and 51, Wellesley-rd., and 63, Devonshire-rd.

Westminster.—HALL REPAIRS.—Work is to be put in hand immediately for the repair of Westminster Hall.

Wood Green.—BUILDING PLANS APPROVED.—The B.C. have approved plans submitted to them as follows: Mr. F. F. Tomlin—rebuilding of Nos. 109 and 111, Arcadian-gdns.; Mr. C. W. Dennis—rebuilding of Nos. 35 and 37, Pellatt-gr., and of Nos. 368 and 370, Alexandra Park-rd.; British Broadcasting Corporation—alterations to N.E. Painting Studio and visitors' gallery, Alexandra Palace; Middlesex County Council—canteen kitchen and dining-room, Bounds Green School.

(PROVINCIAL)

Armitage (nr. Lichfield).—Plans for extensive alterations at sanitary works of Edward Johns & Co., Ltd., have been prepared by Wood, Goldstraw & Yorath, architects, Tunstall, Stoke-on-Trent. R. I. Warwick, A.M.I.Struct.E., is consulting engineer.

Ashton-under-Lyne.—T.C. approved structural alterations at "Star" inn, Cotton-st., and "Buck and Hawthorn" hotel, Katherine-st., for Frederic Robinson, Ltd., Unicorn Brewery, Stockport.—Alterations at Ryecroft Mill, Smith-st., for Littlewood's Mail Order Stores, Ltd., 100, Old Hall-st., Liverpool, 3; clothing factory, John-st., for Carr, Clegg & Sons.

Bedlington.—W. Stockdale, 73, Howard-st., North Shields, is architect for factory for Welwyn Electrical Laboratories, Ltd.

Belfast.—City Council to carry out scheme to provide district heating for 522 houses at Bemerton Heath estate, Salisbury, at £87,000.

Bentley.—Lewis Massarella & Sons, Ltd., propose coach building and motor body works.

Birkenhead.—William & Segar Owen & Co., architects, Warrington, to prepare plans for rebuilding the Argyle Theatre.

Bretton.—Cheshire Construction Co., Ltd., Middlewich-rd., Sandbach, propose offices and factory.

Bromsgrove.—H. L. Shutkever propose 240 houses at Wychwood Park, Wythall.

Caernarvonshire.—E.C. propose central dining hall at Caernarvon.

Cannock.—R.D.C. propose 160 houses off Cannock-Stafford-rd., Huntington.

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Cheadle, Staffs.—British Hard Rubber Co., Ltd., propose factory off Ceciley Brook and Well-st.

Chesterfield.—E.C. propose extensions at "William Rhodes" secondary school.

Clowne.—J. B. Lewis & Sons, Ltd., hosiery manufacturers, Haydn-rd., Sherwood, Nottingham, propose new works.

Colne Valley.—U.D.C. propose swimming baths at Slaithwaite, at cost of £50,000.

Darlington.—E.C. to erect kitchens and dining-rooms at Alderman Leach, Dodmire, Rise Carr, Eastbourne, and St. John's C.E. schools.

Ellesmere, Salop.—Griffiths Bros., Brownlow-rd., propose housing estate at Willow-cres.—Salop E.C. approved development of primary and secondary schools at Ellesmere at £129,700.

Garstang.—R.D.C. propose development of sites at Barrows-la., Great Eccleston, and Sandy-la., Hambleton, for housing estates.

Hyde.—T.C. approved:—Additions at Barleyfields Mill, Newton-st., for Ashton Bros. & Co., Ltd.; alterations, "George" hotel, Great Norbury-st., for Frederic Robinson, Ltd., Unicorn Brewery, Stockport; alterations to works, Stockport-rd., for Coachcraft Metal Works Co.; alterations and additions to offices at works, Pine-st., for T. E. Warrington (Hyde), Ltd.

Lancaster.—Divisional E.C. approved provision of 7 modern secondary, technical and grammar schools.

Manchester.—E.C. approved:—Completion of Old Hall-dr. secondary school; revised plans for County primary school at Crossacres, Wythenshawe, N.W. Unit.—T.C. approved:—Alterations at Belle Vue-st. and Promfret-st., Gorton, for Joshua Tetley & Sons, Ltd., Hunslet-rd., Leeds, 10; additions to Central Mills at Chapel-la., Blackley, for Wallpaper Manufacturers, Ltd.

Middleton.—T.C. approved:—Additions to works, Lodge-st., for Wilton Manufacturing Co., Ltd.

Morpeth.—R.D.C. to erect 200 houses at Broomhill. Plans by Mauchlen & Weightman, Saville-row, Newcastle.

Newcastle-on-Tyne.—City Council is to erect covered-in bus station at Haymarket. Plans by City E.

Oldham.—T.C. propose kitchen at Westhulme Hospital, at £2,400; branch libraries at Werneth and Glodwick.

Oxford.—City Council to apply to M.H. for sanction to extend contract of Harry Neal, Ltd., to provide additional 150 B.I.S.F. houses at Barton No. 4 estate.

Rotherham.—Rotherham Co-operative Society, Ltd., Main-st., propose buildings and dairy at East Herringthorpe-rd. D. B. Jenkinson & Son (F./A.), architects, Imperial-bldgs., High-st.

Salford.—T.C. approved:—Canteen at Greengate and Collier-st., for E.C.; alterations for factory at Brindleheath-rd., Brierley-st., and Harding-st., Pendleton, for Domestos, Ltd.; Joshua Tetley & Sons, Ltd., Hunslet-rd., Leeds, 10, propose rebuilding "Flying Horse," Greengate.

Sedgley.—U.D.C. approved additions to works at Coopers Bank-st., for Gibbons (Dudley), Ltd.; factory at Burton-rd., for D.C.T. Engineering Co.

Sheffield.—G. A. Axe & Co., Ltd., 18, Canning-st., propose works at Ecclesall-rd; F. E. Hall & Co., Ltd., propose works at Bramall-la.

Shrewsbury.—T.C. propose 100 houses at Crowmoor.

South Shields.—Sites obtained by E.C. for dining-rooms at Barnes-rd. school and St. Gregory's Voluntary Primary school. School kitchen proposed at Laygate-la., kitchen and dining-room at Shanhope-rd. school.

South Shields.—Canteen kitchens to be built at Heaton-la. and Centenary-ave.—North-Eastern Trading Estates, Gateshead, propose factory at Adelaide-st. Plans by E. E. Morgan, North-Eastern Trading Estates.

Stockport.—T.C. approved works at Carlisle-st., Edgeley, for Marine Engineering Co., Ltd.; extension of confectionery works at Eastcote-rd., for South Reddish Co-operative Wholesale Society, Ltd.; alterations and additions at Newton Mills, Manchester Old-rd., for R. A. Sawdon & Co.; extensions to works, Carrington Field-st., for Murray & Ramsden, Ltd.

Stoke-on-Trent.—Plans have been completed for Research Station at Penkhull, for British Pottery Research Association, by Wood, Goldstraw & Yorath, architects, Tunstall, Stoke-on-Trent. Dr. Oscar Faber is consulting engineer for heating, lighting and ventilating.

Stretford.—T.C. approved:—Works extensions at Elsinore-rd., for H. Hunt & Sons, Ltd.; office extensions, Skerton-rd., for Antrobus & Blackshaw; fire station, Westinghouse-rd., for Imperial Chemical Industries, Ltd.

Swinton and Pendlebury.—A. & J. Davies, Clifton, propose 62 houses at Manchester-rd., Clifton.

Swinton and Pendlebury.—C. R. Smith, B.S., preparing plans for neighbourhood unit at Clifton.

Urmston.—U.D.C. approved:—Additions and extensions to works, Tenax-rd., Trafford Park, for Geigy & Co., Ltd.

Walsall.—T.C. approved extension for J. A. Crabtree & Co., Ltd., at £100,000.

Warrington.—T.C. approved:—Showroom and offices, junction of Winwick-rd. and Hawley's-la., for Johnson, Wilde & Co., Ltd.; C. J. Bent & Son, Upper Bank-st., propose building off Buttermarket-st.; Warrington Motor Co., Ltd., Holt-st., propose showrooms and warehouse at Upper Bank-st. and Holt-st.

Wigan.—British Celanese Co., Ltd., propose factory at Goose Green.; Vibrocon (Norwest), Ltd., propose precast concrete works.

Worcs.—E.C. propose 64 schools for seven districts.

TENDERS

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H.M. Government departments*.

Ashton-under-Lyne.—86 "Beanland" precast houses at Timperley-rd. site, for T.C. A. T. Kemp, B.S.: *Beanland Unit Construction Co., Ltd., London, £104,930.

Aylesbury.—46 houses at California, for T.C.: *C. & F. Ricketts, Ltd., 16, Walton-st., Aylesbury, £60,517 (subject to M.H. approval).

Bakewell.—12 houses with roads and sewers at Youlgreave site, for R.D.C. R. Hayhurst, S.: *B. R. Marsden, Turret House, Youlgreave, nr. Bakewell.

Barnstaple.—Houses at Prixford, Marwood, for R.D.C.: *H. & G. Goss & Sons, £4,848.

Bidston.—Factory for Vernons Industries, Ltd., Vermail House, Mile End, Liverpool. Kenmure Kinna (F.), 14, Castle-st., Liverpool 1: *John Williams (Builders), Ltd., 70, Collingwood-st., Liverpool.

Birkenhead.—Conversion of 100, Bidston-rd. for police purposes, for T.C. B. Robinson, B.E.: *E. R. Williams & Co., 2, Greenway-rd., Birkenhead, £3,104.

Birkenhead.—Two additional villas at Cranage Hall Mental Colony, for Committee of West Cheshire Joint Board for Mentally Defectives: *Moston Brick & Building Co., Ltd., Kenyon-la., Moston, Manchester 10.

Blaydon-on-Tyne.—Four houses at Axwell Park, for U.D.C.: *W. L. McCutcheon, 44, Mill Hall-rd., East Denton.

Bolton.—Conversion of "Watermillock" into hostel for aged persons, for T.C. C. Herbert, B.E.: *Ainscow & Low, Weston-st., Bolton, £3,728.

Brierley Hill.—60 houses at Hulland site and 16 at Blaze Park site, for U.D.C. J. R. Moore (A.), Council House: *A. H. Guest, Ltd., Coalbourne Brook, Stourbridge, £66,911 and £17,868.

Geiriog.—74 houses and 10 bungalows, together with footpaths, etc., at Hand Hotel site, for R.D.C. R. W. Aubrey, S. Contract No. 1: †Francis Roberts & Sons, Trevor, Wrexham, £73,467; Contract No. 2: †William Gittins (Contractors), Ltd., High-st., Johnstown, Wrexham, £54,333.

Colne Valley.—Masons', plumbers' and painters' work for 50 houses, at Waingate site, Linthwaite, for U.D.C. N. Heppenstall (L.), 39, Market-st., Milnbridge, Huddersfield: *J. Wimpenny & Co., Ltd., Spurn Point, Linthwaite, Milnbridge, Huddersfield, £53,766.

Croydon.—14 houses at Ashburton estate, for B.C.: *Malpas Construction Co., 37, Scarbrook-rd., Croydon, £16,405.

Cumberland.—11 police houses for County Police Committee: *J. Drummond, Harrington, £23,845 (subject to Home Office approval).

Daventry.—22 houses at Flore, for R.D.C.: *Hill-Leighton & Co., Ltd., Leighton Buzzard, £27,866 (subject to M.H. approval).

Daventry.—Airey houses, for R.D.C.: *J. Wilson, Daventry (six at Newnham and two at Welton), £12,546; *P. Shilton & Partners, Foleshill, Coventry (two at Barby, two at Everdon and six at Woodford), £15,496.

Deptford.—Works for B.C. Erection of 58 dwellings at Milton Court-rd., *Wm. Marshall (Builders), Ltd., 115, Salehurst-rd., S.E.4, £95,171; 24 dwellings at Knoyle-st., *Greenaway & Son, 265a, Lordship-la., S.E.22, £32,838; 48 flats at Africa-rd., *Allsites, Ltd., 55, Pall Mall, S.W.1; 100 flats at Clyde-st., *W. J. Simms, Sons & Cooke, Ltd., 78, Mount-st., Park-la., W.1; rebuilding 7 houses at Brockley estate, *Campbell-Gray, Ltd., 27, Maxted-rd., S.E.15, £9,620.

Doncaster.—36 houses, Wheatley Park estate, for C.B. R. E. Ford, A.M.I.C.E.: *Albert Wortley, Ltd., 138, Armthorpe-rd., Doncaster, £42,973.

Eastry.—12 houses with roads and sewers, etc., at Wingham, for R.D.C.: *C. V. Buchan & Co., Ltd., Dover and Brighton, £16,878.

Erith.—Four houses at Parsonage Manor Way, for T.C.: *Direct Labour, £4,587.

Erpingham.—Six houses at Mundesley, for R.D.C.: *B. E. Gotts, Trunch-rd., Mundesley, £6,533.

Fulham.—Repairs to properties at Playfair-st., and Lewis Trust Dwellings, for T.C.: *A. H. Franklin & Sons, Ltd., 178, Munster-rd., S.W.6, £7,930; and *W. A. Bartlett & Co., Ltd., £8,500.

Gateshead.—311 houses at Lobley Hill, for T.C. H. J. Cook, Chief Architect, Municipal-bldgs.: *John Clark & Sons (New Seaham), Ltd., Gregson-ter., New Seaham (subject to M.H. approval).

Hammersmith.—Conversion and adaptation of properties at Rayleigh-rd., for T.C.: *G. Wimpey & Co., Ltd., Hammersmith Grove, W.6, £30,896.

Haslemere.—Four blocks of four houses at Sicklemill Hanger, for U.D.C. H. J. Orchard (A.): *Chapman, Lowry & Puttick, Ltd., Haslemere.

Holborn.—Conversion of "Shelbourne Hotel" into 12 flats, for B.C.: *Hunter & Clark, Ltd., £15,222 (subject to M.H. approval).

Holmfirth.—25 houses, roads and sewers at Moorland site, for U.D.C. Noel Heppenstall (L.), 39, Market-st., Milnbridge, Huddersfield: *J. Wimpenny & Co., Ltd., Spurn Point, Linthwaite, Milnbridge, Huddersfield.

Horbury.—50 houses at Manor Field site. H. Hillier, S.: *H. Smith & Son, Claremont, The Runtlings, Ossett, nr. Wakefield.

Howden.—8 Airey houses at Kilpin for R.D.C.: *P. R. Gillatt, South Cave, £11,964.

Hull.—126 houses at West Villa estate, for T.C. A. Rankine (A.), City A.: *Kettlewell, Sons & Co., Ltd., 11, Colonial-st., Hull.

Huyton with Roby.—12 bungalows at Hag Plantation site, for U.D.C.: *Direct Labour (in lieu of previously accepted tender).

Ipswich.—12 houses at Rushmere Hall Farm estate, for T.C.: *Direct Labour, £14,700 (subject to M.H. approval).

Kettering.—2 blocks of 4 houses and 1 block of 8 maisonettes at Stamford-rd. estate. *Kettering Corporation Works Dept., £17,937.

Kidderminster.—100 houses, for T.C. J. G. Stewart, B.S.: *J. Cochrane & Sons, Ltd., Ironstone-rd., Rawnsley, Cannock, Staffs, £119,400.

Kingsclere and Whitchurch.—Six houses at Ashmansworth, for R.D.C.: *E. A. Bance & Sons, Ltd., East Woodhay, £7,618.

Kingston-on-Thames.—Block of flats at Tudor-rd., for B.C.: *C. H. Coates, Ltd., Surbiton, £9,816.

Liverpool.—Buildings for Broadgreen High School, for E.C.: *William Moss & Sons, Ltd., Roscoe-st., Liverpool 1.

Liverpool.—Alterations and additions to buildings at Kirkby Trading estate, for the Patent Knitting Co., Ltd., Edge-la. Mill, Droylsden, nr. Manchester: *Roberts & Sloss, Ltd., 19, Baker-st., Anfield, Liverpool 6.

Lleyn.—Six houses, for R.D.C. J. E. Turner, S.: *D. Roberts, Minafon, Llannor, Caernarvon, £7,480.

London.—Erection of No. 20, Alexandra-ave., N.W.10. Architects, L. and C. Hannen and Partners, 9, Victoria-st., S.W.1: *Dunham Builders, Ltd., 69, Victoria-st., St. Albans.

¶London (Admiralty).—*Portsmouth*: United Services Sports Ground, Repairs to Badminton Court and Public Stand, R. J. Winnicott, Connor-rd., Portsmouth; *Fearn*: R.N. Air Station, External protective painting of steel sheeted hangars, Shopfronts (Great Britain), Ltd., 14, Cromwell-st., Glasgow, N.W.

London (Air Ministry).—Contracts to value of £500 or over for week ended October 26:—*General maintenance work*: Pochins (Manchester), Ltd., Bowden, Cheshire. *Alterations to heating and hot water supply installations*: Comyn Ching & Co. (London), Ltd., London, W.C.2. *Overhaul door gear to hangars*: G. M. Carter (Erectors), Ltd., Newcastle-on-Tyne, 2. *Maintenance of petrol installations*: D. Bywater & Co., Ltd., Windsor. *Electrical work*: Long & Crawford, Manchester, 12. *Painting work*: Alan Best, Ltd., London, S.W.8. *Repairs to lagging*: Cork Insulation & Asbestos Co., Ltd., London, E.C.1. *Lagging work*: Kitsons Insulations, Ltd., London, E.14.

¶London (M.o.W.). Contracts placed by M.o.W. during week ending October 24:—*London:* Hammersmith Employment Exchange, annexe, Haymills (Contractors), Ltd., Hangar Green, W.5. *Berwickshire, Eyemouth:* site work and houses, T. Gardiner, Well Close-sq., Berwick-on-Tweed. *Bucks:* Bletchley Park, conversions, E. E. Reed & Co. (Builders), Ltd., School-la., Farnham Common. Hartwell P.O.W. Camp, alterations and additions, Frank J. Mitchell, Ltd., 25, Wendover-rd., Aylesbury. *Cambs.:* Wisbech Queen's school, temp. building, H. & L. Cave, Wisbech-rd., Thorney, Peterborough. *Dumfriesshire:* Marchmont school, central kitchen, Campbell Bros., 140, Deanstone-dr., Glasgow, S.1. *Durham:* South Shields Mowbray junior school, dining-room and scullery, John Jackson & Sons, 72, Corporation-st., Newcastle-on-Tyne. Easington R.D.C.2, site work and foundations, aluminium houses, Randle & Co., Ltd., Cedric Joinery Works, Sunderland. *Gloucester:* Bristol C.B.28, Tarran and Arcon houses, and roads and sewers, Downing, Rudman & Bent, Ltd., Old-rd., Chippenham, Wilts. *Hampshire:* Southampton C.B.15, site work for aluminium houses, Sloggetts, Hampton Hill, Middx. Portsmouth C.B.13, site work for aluminium houses, Brazier & Sons, Ltd., 303/305, Portswood-rd., Southampton. *Huntingdonshire:* Great Staughton, temp. houses, A. J. Potter & Sons, Ltd., High-st., Stanwick, Wellingborough. *Kent:* Dover P.O. Cable Jetty, structural repairs, Mackley, Shoreham-by-Sea, Sussex.

Lanarkshire, Airdrie: site work and foundations, aluminium houses, John Crow & Sons, 37, Haddington-pl., Edinburgh, 7. Glasgow Wellshot Junior Secondary school, temp. classrooms, R. Sproul & Sons, Ltd., Wellshot Farm, 47, Buchanan-dr., Cambuslang. Blantyre, site work and foundations, aluminium houses, Scottish Tarmacadam & Asphalte, Ltd., 44/52, Bilbao-st., Glasgow, C.5. *Lancs.:* Manchester, Stretford Lostock senior school, temp. building, Robert Carlyle & Co., Ltd., Elsinore-rd., Old Trafford, Manchester. Southport, Birkdale, Our Lady of Lourdes R.C. school, kitchen and dining-room, Humphreys, Ltd., 1122 Exchange-b.dngs., Liverpool, 2. Blackpool C.B.5, Grange Park estate, site work and foundations, aluminium houses, Brown & Jackson, Ltd., Elm-st., Fleetwood. Stretford M.B.2, Gorse Hill Recreation Ground, site work and foundations, aluminium houses, R. Carlyle & Co., Ltd., Elsinore-rd., Old Trafford, Manchester. Nelson, M.B.1, Hole House estate, site work and foundations aluminium houses, J. H. Naylor & Son, Ltd., Celia-st., Burnley. *Midlothian:* Whitecraig, site work and Tarran houses, John Best (Edinburgh), Ltd., The Office, Warriston House, Edinburgh, 4. *Staffs.:* Armitage, Airey houses, Geo. T. Roberts & Sons, Ltd., High-st., Brownhills. *Stirlingshire:* Kilsyth R.C. school and Kilsyth Academy, temp. classrooms, Wilson & Garden, Ltd., 17/21, Newton-st., Kilsyth. *Sussex:* Moulsecombe Senior Boys school, erection temp. buildings, E. H. Curd & Co., Shoreham-by-Sea, 25. *West Lothian:* Broxburn, site work and Uni-Seco houses, John Best (Edinburgh), Ltd., The Office, Warriston House, Edinburgh, 4. *Worcs.:* Tolladine Housing estate, repairs and making-up of roads, Stuart N. Wood, 350, Bearwood-rd., Smethwick, 41. *Yorks.:* Thorne R.D.C.1, site work and foundations, aluminium houses, Quibell & Son, Ltd., Bentley-rd., Doncaster. Hull, Northumberland Avenue school, temp. building, A. J. Darneley & Sons, Ltd., 68, Spring-st., Hull. Hull, Eastfield-rd. school, temp. building, A. J. Darneley & Sons, Ltd., 68, Spring-st., Hull. Sowerby Bridge U.D.C.2, temp. building, J. B. Brooke & Son, Ltd., 264/274, Manchester-rd., Huddersfield.

¶London (War Dept.).—Works contracts placed by War Dept. for week ended October 19: *Yorks*: Miscellaneous work, R. Cleminshaw, Ltd., Hull.

Ludlow.—24 houses at Cleobury Mortimer, for R.D.C. G. W. Graham, S.: *J. McLean, Coven, Tettenhall, Wolverhampton.

Macclesfield.—Eight houses at Langley, for R.D.C. J. H. Walters, Architect, 11, Moody-st., Congleton: *Gorton & Wilson, Elizabeth-st., Macclesfield.

Market Bosworth.—10 houses at Groby, for R.D.C. A. N. Trowbridge, S.: *W. C. Chapman & Co., £9,800.

Merioneth.—Canteen kitchen and dining-room at Maenofferen Schools, Blaenau Ffestiniog. County A.: *D. R. Pugh & Son, Gwynfa, Dolgelly, £11,258 (subject to M. of E. approval.

Middleton.—Conversion of Hopwood Hall, Hopwood, into 11 flats, and Lancaster Hall into

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four flats, for T.C. J. Pollard (L.), B.E. & Architect: *Direct Labour Dept., £2,300.

Morecambe and Heysham.—100 "Tarran" houses, Blackberry Hall site, for T.C. R. B. Savage, B.E.: *Tarran Industries, Ltd., Clough-rd., Hull, £120,000.

Nottingham.—Alterations at Florence Night-ingale Ward 2, at City Hospital, for T.C. R. M. Finch, O.B.E., M.Inst.C.E., City E. & S.: *Thos. Long & Sons, Ltd., Forest Close Works, Not-tingham-rd., Nottingham (subject to M.H. approval).

Onchan (I. of Man) Village Commissioners.—13 houses at Nursery-ave. W. T. Quayle, F.S.I., F.I.A.A., 29, Athol-st., Douglas. *A. M. Grim-shaw, Alberta-dr., Onchan, Isle of Man, £18,265

Otttery St. Mary.—Four pairs of houses at Alfington, for U.D.C. Antony Lamb (A.), architect: *A. C. Carnell, Colstocks, nr. Honiton, £9,545.

Oxford.—Kitchen and dining-hall at Heading-ton Quarrey C.E. school, for City Council: †T. H. Kingerlee & Sons, Ltd., 35, Queen-st., Oxford, £1,479.

Pembroke Dock.—Factory at Kingswood, for Board of Trade: *Charles Tyler, Richardson-st. yard, Swansea.

Penistone.—Eight Swedish houses at various sites, for R.D.C.: *Bertram & Illingworth, Wadsley Bridge, £6,578.

Penmaenmawr.—50 houses at Cae Gamdda estate, for U.D.C.: *Edward Jones, Penmaen-mawr, £58,741 (subject to M.H. approval).

Poole.—Factory for Sharp, Jones & Co., Ltd., Bourne Valley Pottery, Parkstone, Dorset. Architects: Wood, Goldstraw and Yorath, Tun-stall, Stoke-on-Trent, in association with R. A. Phillips, Christchurch-rd., Bournemouth. General contractors, Jenkins, of Bournemouth and Southampton; structural steelwork, Cargo Fleet Iron Co., Ltd.; roofing, Robertson's Building Service; ovens and chimneys, James Ratcliffe & Sons, Buckley, Chester.

Poplar.—Erection of 48 three-storey flats at Abbott-rd., for B.C.:—

Winsley Development Co., S.W.1.	£107,334
Holmes White, G., Ltd., Goodmayes	92,235
Reader Bros., E.9	91,897
Sir Lindsay Parkinson & Co., Ltd., W.C.2	91,005
Griggs & Sons, Ltd., S.W.1.	87,572
Hudson, Geo., & Co., E.18	86,000
Leightons, Ltd., W.1.	84,582
Estimate of Borough Engineer and Surveyor	81,894
*Finer, J. E., & Son, 167, Burdett-rd., E.3	80,260

(Subject to necessary consents.)

St. Albans.—36 houses at Cottonmill-la., for T.C.: *Dunham Builders, Ltd., 69, Victoria-st., St. Albans.

St. Pancras.—Works for B.C. 83 flats at Peckwater-st:—

Galbraith Bros., Ltd.	£197,469
Tersons Builders	196,800
Foster & Dicksee, Ltd.	195,420
F. Troy & Co., Ltd.	193,004
Trollope & Colls, Ltd.	192,500
Patman & Fotheringham, Ltd.	192,189
Falkus Bros., Ltd.	191,056
Mattock & Parsons, Ltd.	190,478
Dove Bros., Ltd.	190,147
M. J. Gleeson, Ltd.	190,120
F. R. Hipperson & Son, Ltd.	189,728
Geo. Parker & Sons, Ltd.	189,251
Hall, Beddall & Co., Ltd.	185,335
*J. M. (Contractors), Ltd.	167,268

Site clearance work at Cromer-st. site: *Demolition & Construction Co., Ltd., £8,039.

Seaton Valley.—80 houses at Klondyke estate, Cramlington, for U.D.C.: *J. E. Gardner, Ltd., St. Cuthbert's-rd., Gateshead-on-Tyne, £91,200 (negotiated price).

Sedgley.—26 houses at Gibbons-hill, for U.D.C. W. M. Jones, S.: *Tomlinson Bros., High Park-cres., Sedgley, nr. Dudley.

Settle.—(a) Five pairs of houses, Goodenber-rd. (North), High Bentham; (b) four pairs of houses, Ribblesdale estate, Long Preston, for R.D.C. N. L. Jaggar, A.M.I.C.E., M.I.M.C.E., E. & S. High Bentham: *A. Robinson & Sons, West End-rd., Morecambe; Long Preston: *T. Davidson, Cammock-la., Settle. (Subject to M.H. approval.)

Silloth.—Additional classrooms at Council School, for Cumberland E.C.: *W. Hinson, 16, Warnpool-st., Silloth, nr. Maryport.

Stockton-on-Tees.—Four houses at Adelaide-gr.: *W. Cowan & Son, Skinner-st., Stockton-on-Tees.

Stretford.—138 houses, 64 flats and 18 shops with flats over, at Barton-rd. site, for T.C. A. H. Perry, B.E.: *Hampson & Kemp, Chorl-ton-cum-Hardy, Manchester 21; *C. H. Godfrey & Sons, Ltd., Bowling-rd., Gorton, Manchester 18; *W. L. Gray (1933), Ltd., Hospital-bldgs., Hospital-rd., Farnworth, nr. Bolton.

Tendring.—16 Airey houses at three sites, for R.D.C. S. E. Carroll, E. & S.: *Smith Herbert (Clacton), Ltd., Clacton-on-Sea, £26,600 (subject to M.H. approval).

Thedwastre.—Houses for R.D.C. 12 at Thurs-ton: *J. Crosse, Woolpit, £16,148; two at Bey-ton: *F. W. Mulley & Sons, Woolpit, £2,340.

Wellington.—Houses at Longforth site, for U.D.C. 10 houses and eight flats: *W. Follett, £18,012; 20 houses: *H. Hill & Sons (Welling-ton), Ltd., £26,000; 16 houses: *C. J. Rowland, Ltd., £20,062.

West Ham.—Rebuilding 47 dwellings at Hol-brooke-rd. and Ladysmith-rd., for T.C.: *J. Boyd Gibbins, 285, Romford-rd., E., £48,002.

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